The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 604.—Vol. XVII. LONDON, SATURDAY, MARCH 20, 1847. [Price 6d.

VALUABLE MINING MATERIALS FOR SALE.—To be SOLD BY AUCTION, by Mr. PRYOR, at WHEAL KAYLE MINE, in the parish of Philiack, on TUESDAY, the 23d of March inst., at Eleven o'clock in the forenoon, the following

VALUABLE MINING MATERIALS—viz.:

One 30-in. PUMPING ENGINE, 10 ft. stroke in cylinder and 8 ft. in shaft, with boiler of about 8 tons; 1 horse whim and shaft tackle; 29 8-in. pumps; 16 6-in. ditto; 1 8-in H-piece and top door-piece; 1 8-in. knee-piece and top door-piece; 1 6-in. H and top-door piece; 1 6-ft. 8-in. door-piece; 1 6-ft. 7-in. ditto; 1 9-ft. 8-in. windbore; 2 4-ft. 8-in. ditto; 1 4-ft. 6-in. ditto; 1 10-ft. 8-in. working-barrel; 2 10-ft. 7-in. ditto; 2 9-ft. 7-in. ditto; 1 6-in. stuffing box and gland; 1 6-in. ditto; 1 8-in. plunger pole; 1 6-in. ditto; 14 pair of rod plates; 30 fms. of bucket rods; 4 horse whim kibbles; rod bolts and flanch bolts; 50 fms. of 8-in. rods; a quantity of timber and ladders; 14 miners' chests; 3 jigging hutches; 1 32-in. smiths' bellows, and anvil; miners' tools; 1 balance-bob; staples and gland, and old iron; good capstan and shears, with cast-iron socket; one pair of small caps; three underground cisterns. 1

THE COUNTING-HOUSE FURNITURE, &c.

The auctioneer invites the particular attention of mine agents, and others, to these materials, which are all nearly new, and being within a mile of Hayle, are most conveniently situated for shipment, if required.

The materials may be viewed, on application to the agents on the mine, of whom, and of Mr. Pryor, the auctioneer, all further information may be obtained.

The sale will commence at Eleven o'clock precisely.—Dated Comford, March 10, 1847.

MINING SETT AND MATERIALS FOR SALE, IN HARROWBARROW CONSOLS, CALSTOCK, CORNWALL.

TO BE SOLD, BY PUBLIC AUCTION, on Tuesday, the 30th day of March inst., at Twelve o'clock in the forenoon, by Mr. R. PETER, auctioneer, either in one lot, with the sett (17 years of which are unexpired) in Harrowbarrow Consols Mine aforesaid, or in such other lots as shall be agreed on at the time of sale, the undermentioned 2

VALUABLE MINING MATERIALS:

Comprising 2 whim stands, pulleys, poppet heads and traces, whim and tackle ropes and chain, 2 capstan pulleys, 9 whim and winze kibbles, 2 pieces of Norway balk, 1 piece of half timber, 1 piece of American timber, a quantity of new and old plank, shaft casing, 18 gallon water barrel (new), 2 copper sieves, 1 dozen sieves, a quantity of nails, barrel of tar, barrel of grease, shaft ladder, 42 fathoms of double tram rails, 6 tram wheels, tram saddles, bucking plate, 1 dozen landing and wheelbarrows, 1 dozen shovels, quantity of shovel and pick hilts, stove, quantity of hoop, bar, flat, round, and other iron, bar of gad steel, quantity of powder, safety fuze, powder cans, and barrels, candles and boxes, 2 work benches, smiths' bellows, anvils, sledges and hammers, crane, quantity of smiths' and miners' tools of every description, forge trough and canopy, screw plates and taps, miners' mining and other materials.—Also, a QUANTITY of useful and OLD IRON.

For viewing the same apply to Capt. Cook, at Harrowbarrow, aforesaid; and for further particulars, to the auctioneer, or to Mr. S. Penny Serjeant, solicitor, Callington.

Dated Callington, March 17, 1847.

MINES OF COAL AND IRONSTONE.—TO BE SOLD, OR LET, the very valuable VEINS, or SEAMS, of HARD and SOFT COAL, together with the several MINES of IRONSTONE, contained in the CODNOR BREACH ESTATE, consisting of about 100 acres, situate in the parish of HEANOR, in the county of Derby. The above minerals are separated only by a few acres of ground from the workings of the Loscoe Colliery, and a continuation of the levels from the latter would drain the whole.—For further particulars, application may be made to Mr. William Beach, Portland Colliery, Mansfield. 3

ONE LARGE PUMPING-ENGINE.—TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, Helston, Cornwall, one 80-inch pumping-engine, 10 feet stroke in the cylinder, and 8 feet in the shaft, with three tubular boilers of about 35 tons, a balance-bob and top-piece of rod to each. This excellent engine was erected by one of the first engineers in the county; the air-pumps are lined with brass, and the whole of the machinery possesses great strength and durability. It has done a "duty" equal to the first in Cornwall, and is well worth the attention of any gentleman or company requiring such a powerful machine. The engine will be sold with or without the boilers, balance-bobs, &c., as may best suit the purchasers.

Application to be made to Capt. R. Williams, on the mines.

Dated Godolphin Mines, Helston, Cornwall, February 25, 1846. 4

FOR SALE, a CONDENSING STEAM-ENGINE, of 20- horse power, capable of working up to 30—just completing, by a first-rate London maker. This engine has been built to the order of a company, who now require one of a different description.—For further particulars, and order to view, apply to Messrs. Palmer and Nettleship, 4, Trafalgar-square, London. 5

TO BE SOLD—TWO HIGH-PRESSURE STEAM- ENGINES—one 40 and the other 30-horse power, calculated at 30 lbs. pressure. These engines are entirely new, and are very strongly built, having been intended for driving heavy machinery, and are not now required.

For particulars apply to Mr. Mathew Smith, 26, Button-lane, Sheffield. 6

COLLIERY FOR SALE, in the county of NORTHUMBER- LAND.—FOR SALE, BY PRIVATE CONTRACT, with entry, either immediate, or as may be agreed upon, that current-going COLLIERY, called WEST CRAMLINGTON COLLIERY. The coals are certified as "Buddle's West Hartley," and are of the best steam quality: they have been tried, and being approved of, by the Admiralty authorities, are admitted into the Government, as well as the East India Company's, contracts for supplying coals for their steam-packets, &c.

The royalty immediately joins that whence the Original West Hartley Coals are worked, and as good prices are obtained as from any colliery producing steam coals. 7

For particulars apply to Mr. R. W. Swan, Percy Main Office, Quay, Newcastle; or to Mr. Thomas Taylor, at the colliery.

West Cramlington Colliery, Feb. 23, 1847.

MINING ADVENTURERS' SUBSCRIPTION ROOM, AND REGISTRY OFFICE,

For the Sale and Purchase of Mining Shares.

CROSSMAN, SOMMERS, AND CO., AGENTS,

26, THREADNEEDLE-STREET, LONDON.

PROSPECTUS.

It is a subject of general regret, and continual complaint, amongst parties extensively engaged in mining operations in Cornwall and Devon, and who are annually devoting much time and money to the development of the mineral resources of this country, that there is not at present, and never yet has been, an open and well organised Market for the Sale of Mining Shares.

It is, by such parties, universally admitted, that the absence of an office for the registry of Mining Shares on Sale, has entailed, both on the seller and the purchaser, innumerable evils, under which the mining interest has hitherto suffered, and under which it will continue to be depressed, until a system be adopted, embracing the *requisite publicity* which should be afforded to *all property for sale*, with the *prudent concealment* of all *personal facts* which are *not essential in establishing* its *intrinsic or marketable value*. To obviate this evil, and in pursuance of a plan suggested by several of the most influential mining adventurers,

Messrs. CROSSMAN, SOMMERS, & CO., 8

Beg leave to announce, that they have ESTABLISHED OFFICES at No. 26, THREADNEEDLE-STREET, LONDON, wherein they propose to CONDUCT the BUSINESS of GENERAL MINING SHARE AGENTS, upon the following principle, to the rigid fulfilment of which they hereby pledge themselves:—

To abstain from all jobbing in shares, and from the purchase of shares on their own behalf, whilst professing to act as agents for the sale or purchase for others.

To register, and submit such register to all applicants, the number and price of all shares of which a sale is authorised—such authority to be produced, if required, upon the completion of any transaction.

To receive one uniform rate of commission—such commission to be chargeable upon the party authorising the sale or purchase, at the rate of £5 per cent., if the amount be under £50, and £2½ per cent. upon any amount exceeding £50.

To register all offers for shares, and to submit the same to such parties as shall have registered their shares at this office.

To receive, and lay open for inspection, reports from authenticated agents, or well-accredited parties only—such report being obtained upon absolute survey and inspection; and to abstain from the sale of shares in any mine of which the debts and liabilities, at the last audit of accounts, cannot be obtained.

The offer for quotation in the *Mining Journal*, and in any other weekly paper devoted to such purposes, the price of shares registered for sale; as also the price upon which a sale or purchase has been affected, and upon which the commission has absolutely been paid.

In connection with the foregoing, and under the support and patronage of many influential mining adventurers, Messrs. Crossman, Sommers, and Co. have appropriated a room [illegible] ended to form a nucleus of a

[illegible]ING ADVENTURERS' ASSOCIATION, OR SUBSCRIPTION ROOM.

The annual subscription to be One Guinea, which will entitle the subscriber to the daily use of the room, of the mining periodicals, and to the depositing and exhibiting of specimens of ore, and reports connected therewith.

The above annual subscription shall entitle a mining company to the exhibition of specimens, reports, and the *entrée* of their purser or captain.

It is intended, should this subscription room receive the support and patronage of adventurers generally, to obtain more ample accommodation for establishing an association in every respect commensurate with the important interest thereby represented; and to attempt to associate with mining adventurers such scientific parties, not being adventurers, as may be desirous to cultivate, or extend, a knowledge of this most important branch of national wealth, by affording the practical miner and the geologist more frequent opportunities of communication and association.—March, 1847.

MINING JOURNAL.—TO BE SOLD, the FIRST SEVEN VOLUMES of the "MINING JOURNAL," perfect, as published.—Applications to be made (by letter) to the Editor of the *Mining Journal*, at the office, 26, Fleet-street. 9

WHEAL ST. ANN, DREWSTEIGNTON, DEVON.— WANTED immediately, a SECOND-HAND HORSE-WHIM and PUMPS, for the above mine.—Address to Captain Pearce, Sticklepath, Devon; or to 104, Thomas-street, Bristol.—March 11, 1847. 10

GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.*

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans with the correspondence, may be seen. 11

DYFNGWM LEAD MINES, MONTGOMERYSHIRE.— Capital £30,000, in 3000 shares, of £10 each.—Deposit £3 per share.

Two-thirds of which are retained by the present proprietor.

The liability of the shareholders is limited to the number of shares subscribed, as per 7 and 8 Vic., cap. 110, clause 63.

The above deposit will work these mines, and place them in a position to ensure the shareholders 20 per cent. the first year, with the prospect of a large annual increase.

No further call is anticipated. 12

Applications for shares to be made to Mr. Hays, hon. secretary, 2, Cowper's-court, Cornhill; or to Mr. E. K. Randell, solicitor, 23, Birchin-lane—of whom prospectuses and further particulars may be obtained.

N.B.—The last cargo of lead shipped from these mines, in January, 1847, assayed 77½ per cent., being 7 ozs. 15 dwts., or 1 dwt. above the standard.

ESGAIR-Y-MWYN MINE COMPANY.

Capital £35,000, in 2500 shares, of £10 each.—Deposit £5 per share.

(ESTABLISHED ON THE COST-BOOK PRINCIPLE.)

DIRECTORS.

JOHN SALMON, Esq. — JOHN GOOCH, Esq.
JAMES MORGAN, Esq. — WILLIAM HOLLOWAY, Esq.

(With power to add to their number.) 13

BANKERS.

Messrs. Spooner, Attwood, and Co., Gracechurch-street.

SECRETARY.

Josiah Hiatt, Esq., CROWN MINES OFFICES, 84, Basinghall-street.

This company is formed for working the celebrated LEAD MINE, called ESGAIR-Y-MWYN, which has been one of the most productive and profitable ever discovered in CARDIGANSHIRE—a county famed in the mining annals of Wales. This property is held under the Crown, by lease, from her Majesty's Commissioners of Woods and Forests.

The immense profits which it has produced, at a trifling cost, would appear incredible, but that the authenticated accounts can be seen at the offices. The vein is one of most unusual width and richness. All the past reports merely refer to the discoveries then made, which are of limited extent—whereas there is a quantity of ground untouched, which can be proved at small cost, and may lead to vast results.

The depth of the oldest workings does not exceed 80 fathoms, and the sections show how limited they are—yet they produced upwards of *One Million sterling* in a short period.

During the time this mine realised such large profits, it was worked in the most rude and unminer-like manner—without machinery, or even any facility for working common hand pumps.

The late proprietors have done all the necessary work, and completed all the arrangements for the erection of the best adapted machinery: they have sunk an engine-shaft that will go perpendicular to the bottom of the mine, and which can be carried down to the depth of 100 fathoms below the deepest old workings at light expense—they made a watercourse for a considerable distance, to convey water from the Teifi Lakes—higher than the summit of the mine—for working three water-wheels, and washing the ores.

By one of these wheels all the ores can be drawn from the mine—by another, they can be crushed and prepared for market; and there is another wheel and crushing-mill on the premises, which will be employed in working over the old refuse on the mine, which is very valuable.

It must be obvious, even to those unskilled in mines and the machinery generally used for working them, that, having considerable water-power at the head of the mine, the machinery enumerated must be sufficient to clear it of water to a great depth—to draw all the stuff to surface—and then crush and prepare it for sale, at small cost.

To apply the same power, and do the same work, in Cornwall, it would require three steam-engines; the first cost of which, with their erection and permanent expense, wear and tear, &c., would amount to something very considerable.

There is no difference of opinion, amongst those skilled in mining affairs, as to the great value of this mine. It has been reported upon by numerous mining engineers and geologists—all of whom concur in the opinion, that, if it does not turn out a vast body of ore under the old workings, every analogy on the subject of mineral veins is at an end.

All the reports from the mine, extending over a long series of years, can be seen at the office.

To estimate profits in mining matters is always difficult and uncertain, and is not attempted here. It is, however, expected that there will be no difficulty in raising 200 tons of lead ore per month, which will, in this mine, leave a profit of at least 1000*l*.

As every necessary preparation has been made by the late proprietors for very extensive workings, returns may be expected in the course of a few months; therefore, it is not contemplated that any further call will be necessary.

All maps, sections, and reports—terms upon which the mine and machinery have been purchased, and all other information, will be afforded at the CROWN MINES OFFICES, 84, Basinghall-street, London.

The principles upon which this company will be conducted are—that all payments be made in cash only; and that all the proprietors be called together every two months, to investigate the company's affairs, and declare the dividend payable.

A map, showing the great extent of the sett, is being made, and will be ready in a few days.

All applications for shares must be made to the secretary, and none can be allotted without an interview, an explanation as to the terms of purchase, and conditions of future workings.

PANTDRAINIOG QUARRY SLATE COMPANY, Bangor. —Those APPLICANTS who have RECEIVED LETTERS of ALLOTMENT for SHARES in this undertaking, are requested to PAY the DEPOSITS, to one of the bankers of the company, on or before Thursday, the 25th inst., otherwise the letter will be held cancelled. J. H. MURCHISON, Sec. pro tem.

19, Essex-street, Strand, March 12, 1847. 14

BLAENAVON IRON AND COAL COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders of this company will be HELD at their offices, Pancras-lane, London, on Friday, the 23d of April next, at Two o'clock precisely, when the accounts and transactions of the past year will be laid before them. By order of the board,

Offices, 4, Pancras-lane, London, March 19, 1847. JAMES BOOTH, Sec. 15

CALLINGTON MINES COMPANY.—The Fourth Annual General Meeting of shareholders was held at the offices of the company, No. 44, Finsbury-square, London, on Friday, the 19th March inst.

RICHARD HODGSON, Esq., in the chair. 16

After the reading of the reports of the directors and mine agents, the following resolutions were passed:—

Proposed by Mr. G. Mackay, seconded by Mr. R. James, and carried unanimously,

Resolved,—That the reports and accounts, now read, be received, adopted, and entered in the cost and transfer-book.

Proposed by Mr. W. James, seconded by Mr. John Matthey, and carried unanimously,

Resolved,—That John Field, jun., Esq., be re-elected a director of this company.

Proposed by Mr. W. James, seconded by Mr. R. James, and carried unanimously,

Resolved,—That Messrs. Hammond and Leary be elected the auditors for the current year.

Proposed by Mr. R. James, seconded by Mr. G. Mackay, and carried unanimously,

Resolved,—That the very best thanks of this meeting be given to the chairman and directors, for their careful management of the company's affairs, and the efficient manner in which they have discharged the duties of their office.

RICHARD HODGSON, Secretary.

NATIONAL BRAZILIAN MINING ASSOCIATION.— At a Special Meeting of the shareholders of this association, held at the offices of the company, 26, Throgmorton-street, London, on Monday, the 8th March inst.,

EDWARD OXENFORD, Esq., in the chair;

It was moved by Henry Kemble, Esq., M.P., and seconded by John Field, Esq.,

That the appointment of William Rickford Collett, Esq., M.P., as director of this association, be confirmed.—Carried unanimously.

Moved by Henry Kemble, Esq., M.P., and seconded by John Taylor, Esq.,

That John Irving, Esq., be a director of this association.—Carried unanimously. 17

Moved by Thomas Jeffree, Esq., and seconded by James Hartley, Esq.,

That the thanks of this meeting be given to the chairman and directors of this association, for their able and judicious management of its affairs.—Carried unanimously.

R. IRELAND, Secretary.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,* 18

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

FOR SALE—AUSTRIAN IRON-WORKS, with a LARGE DOMINION, of a value over £300,000.—These works, as one of the most important establishments of the Austrian Empire, are furnished with rich MINES of IRONSTONE, large quantities of WOOD and COALS, some BLAST and REFINING FURNACES, and PLATE ROLLERS. They are situated not distant of the Imperial Railroad. The proprietor is inclined either to dispose of the whole, or, if preferred, to interest himself with a third share. 19

Capitalists, who are disposed to buy or enter into partnership, to address themselves, for particulars, direct to Mr. F. WALLAND ALSER VORSTADT, No. 318, in Vienna.

IRON TRADE.—Messrs. THOS. AND CHAS. HOOD, IRON MERCHANTS, EARL-STREET, BLACKFRIARS, LONDON,

Having been much inconvenienced by repeated applications respecting goods supposed to be supplied to their house, for which they have not given orders, and by the delivery to them of letters intended for other parties, and the delivery to other parties of letters addressed to them, beg to state, that they have NO OTHER ESTABLISHMENT than that in Earl-street—nor any connection whatever with any other house in London of the same name. 20

IRISH ENGINEERING COMPANY.—WANTED, a prac- tical ENGINEER, to SUPERINTEND the general working of a large ESTABLISHMENT in Dublin. It is necessary that he should understand the construction of locomotive engines, and railway work in general, and be capable of making working drawings.—Application, stating the nature of former employment, to be addressed to Messrs. Smith and Willey, engineers, Windsor Foundry, Liverpool. 21

No personal application will be attended to.

TO IRONFOUNDERS AND MANUFACTURERS OF IRON SHIPS, STEAM-ENGINES, LOCOMOTIVES, &c.—TO BE DISPOSED OF, an ESTABLISHMENT, now in full working order, where the ABOVE BRANCHES of the IRON TRADE, and all minor ones, may be CARRIED ON to the greatest advantage. For particulars apply to Mr. R. Roberts, slate merchant, Chester. 22

TO SMELTERS AND OTHERS.—WANTED, by a Gentle- man, AN AGENCY, for the SALE of METALS, suitable for the Birmingham market—having a good connection amongst consumers in that and the neighbouring towns.—For further particulars apply to "R. S.," at *Aris's Birmingham Gazette* Office, Birmingham. 23

TO IRONMASTERS, TIN-PLATE MANUFACTURERS, &c.—A PERSON, who has had several years' practice in the ERECTION of STEAM-ENGINES, ROLLING-MILLS, for bar-iron and tin-plates, by steam or water-power, wishes for an ENGAGEMENT in the ABOVE LINE. The highest testimonials as to character and ability, can be produced. The continent not objected to.—Address (post-paid) "A. B.," care of Mr. R. Tucker, 27, Herbert-street, New North-road, London. 24

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 25

MESSRS. J. PAINTER AND CO, SHAREBROKERS, MINING AND GENERAL AGENTS,

25, *CASTLE-STREET, LIVERPOOL,*

AFFORD EVERY INFORMATION as to the STATE of the MARKETS, PRICES, upon application. 26

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.

THREE KINGS COURT, LOMBARD-STREET, LONDON. 27

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.— N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 28

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES.

18, *THREADNEEDLE-STREET, LONDON.* 29

MESSRS. LINTHORNE, JONES, AND CO., STOCK, MINING, AND SHARE AGENTS,

*** Every information will be afforded as to the markets and prices of the above, by application (post-paid) at their offices,

48, *THREADNEEDLE-STREET, LONDON.* 30

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET,*

has SHARES FOR SALE in the following MINES—viz.: 31

WHEAL LOUISA,	ALBERT CONSOLS,
WHEAL BLENCOWE,	WEST SHEPHERD,
WHEAL MARY PENTUAN,	VICTORIA TIN MINING COMPANY.

*** Every information will be afforded on application.

MESSRS. R. CLARK & CO. beg to acquaint their friends and the public in general, that they have taken OFFICES as below, where they intend to carry on BUSINESS as STOCK, SHARE, and MINING AGENTS; relying with confidence upon the method adopted by them for conducting all business entrusted to their agency, Messrs. R. C. & Co. solicit a continuance of that support it will be, by strictest attention to all orders, their endeavour to deserve.

N.B.—Money advanced upon scrip and other securities. 32

3, Austinfriars, Broad-street, Oct. 17, 1846.

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER, 33

MATTHEW-STREET, TAVISTOCK.

Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

JAMES LANE, MINING SHARE DEALER, 34

75, OLD BROAD-STREET, LONDON.

CALLINGTON MINES COMPANY.—A DIVIDEND, of ONE POUND per share, being the FOURTH in the year 1846, will be PAYABLE here on Wednesday, the 17th inst., and following Wednesdays, between the hours of Twelve and Three o'clock.—44, Finsbury-square, March 10, 1847. 35

TRELEIGH CONSOLIDATED MINING COMPANY.— The directors hereby give Notice, that a MEETING of the shareholders will be HELD, at the office, on Monday, the 5th April next, at One o'clock precisely, when the accounts, for three months, ending the 31st March, will be laid before them; also, to take into consideration other matters, which will be submitted to the meeting. 36

57, Old Broad-street, March 15, 1847. W. NICHOLSON, Sec.

WHEAL CONCORD.—A SPECIAL GENERAL MEET- ING of the shareholders in this mine will be HELD at the offices of the secretary, 4, King-street, Cheapside, London, on Tuesday, the 23d day of March inst., at Three o'clock in the afternoon precisely, for the purpose of making a further call, and on other business.—Callington, March 12, 1847. G. W. SNELL, Purser. 37

LAMHEROOE WHEAL MARIA.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the adventurers, or shareholders, in this mine, will be HELD at 4, King-street, Cheapside, London, on Tuesday, the 30th day of March inst., at Two o'clock in the afternoon precisely, for the purpose of receiving my resignation as the purser, and for the appointment of another purser in my room.

Callington, March 18, 1847. G. W. SNELL, Purser. 38

LAMHEROOE WHEAL MARIA MINING COMPANY. —At a Special General Meeting of adventurers in the above mine, held pursuant to advertisement and circular, under date of the 6th inst., at the offices, No. 4, King-street, Cheapside, London, on Thursday, the 18th of March, 1847,

CHARLES HILL, Esq., in the chair; 39

The notice convening the meeting having been read, the following resolutions were unanimously carried:—

Moved by Mr. Addis, and seconded by Mr. Comer,

That a special general meeting of the adventurers, or shareholders, in the mine be held at 4, King-street, Cheapside, London, on Tuesday, the 30th day of March inst., at Two o'clock in the afternoon precisely, for the purpose of receiving the resignation of the office of the purser, and for the appointment of another person in his stead.

Moved by Mr. Sunley, and seconded by Mr. Addis,

That a call of £1 per share be now made—the same to be paid into the hands of the bankers of the company, at the London and Westminster Bank (Southwark Branch), on or before the 18th day of April next; and that the purser, Mr. G. W. Snell, give notice of the same to the several shareholders.

Moved by Mr. Sunley, and seconded by Mr. Comer,

That the call of £1 per share, made payable on the 5th of April next, be rescinded; and that a call of £1 per share be now made, in lieu thereof, payable on or before the 19th day of April next, into the bankers of the company, the London and Westminster Bank (Southwark Branch), and that notice of the same be issued by the purser.

The thanks of the meeting were passed unanimously to the chairman, and the meeting adjourned. G. W. SNELL, Purser.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.
J. MURDOCH (successor and late assistant to Mr. Hebert)
begs to INVENTORS and PATENTEES, that, at his OFFICE, they can obtain
REFERENCE TO A CLASSIFIED LIST OF PATENTS, 40
(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.
SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.
FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

GAS—THE NATIONAL ECONOMIC GAS BURNER.—A SHADOWLESS LIGHT, WITHOUT SMOKE, AT A SAVING OF UPWARDS OF THIRTY PER CENT.,
And no alterations of fittings required in its adoption; its cleanliness and purity essentially adapts it for
DRAPERS, JEWELLERS, SILVERSMITHS, AND OTHERS; ALSO, PRIVATE HOUSES AND PUBLIC BUILDINGS. 41
REGISTERED ACCORDING TO ACT OF PARLIAMENT.
For perfect Combustion, Brilliancy of Effect, Intensity, Power, and Economy of Light, this NEW BURNER is certain to SUPERSEDE every other BURNER in present use.

The production and supply of artificial light unquestionably hold a distinguished rank among the most important arts of life. The inflammable substances usually employed in furnishing us with such light—as oil, tallow, and gas—however excellent in their natural qualities, require the aid of mechanism to render the flame produced perfectly luminous. When all circumstances are favourable to complete combustion, the flame is perfect; if this be not the case, part of the combustible body passes through the luminous flame unburnt, and exhibits the appearance of smoke—thereby indicating imperfect combustion. To prevent this, a combination of chemical knowledge with mechanical skill is necessary.
To demonstrate the superior advantages of this Burner over the Argand and all others, it is necessary to explain in what respects they are chiefly deficient.
In consequence of the Argand Burner being a uniform cylinder, only the external particles of the column of air which ascend towards the place of combustion will actually combine with the ignited gas; it is evident, therefore, that myriads of globules, or those imperceptible atoms of carbon or smoke, which constitute the centre of this column, are carried, with a velocity peculiar to a cylindrical body of air, beyond the vicinity of the combustion, thereby escaping without being appropriated. It was established by Sir H Davy, while engaged in the invention of the Miner's Safety Lamp, that an unrestricted supply of atmospheric air, though it increased the heat, materially diminished the light yielded by coal gas. In all gas burners the air is admitted without sufficient limitation and regulation, both to the inner and outer surface of the flame.
In the National Economic Burner these great defects are obviated by the following adjustments:—A solid conical button is inserted into the inner air channel, at a certain height from the top of the burner, which arrests and restricts the supply of air, and at the same time causes it to be diffused equally and regularly over the inner surface of the flame; and the outer current is adjusted by means of a conical glass chimney. By this combination the flame is placed between two streams of atmospheric air, nicely regulated to a proper amount, and distributed in the direction most favourable to complete combustion. Artificial light is thus produced, in greater quantities, and of a better quality, than by any means heretofore known, and at a saving of from 30 to 40 per cent.
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Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—In the 28 fathom level end west we have no alteration neither do we expect any here for several fathoms; in the cross-cut south, in this level, we have discovered a small branch of ore, about 2 in. wide, very rich, but in the slide very irregular. In the cross-cut south, in the 18 fm. level, we have discovered a lode which, from its character and appearance, I think is the middle lode—it is the most regular thing we have seen in the mine, standing nearly perpendicular, and worth about 18*l.* to 20*l.* per fm.; I cannot speak definitively as to its continuing its course down; but certainly it will produce a large quantity of ore above this level, and there is every appearance of its continuing down at present. In the 18 fm. level end west, on the north part the lode, is at present poor, although it is large, 3 ft. wide, worth about 8*l.* to 10*l.* per fm.; the south part of this lode, in this level, never looked so well—it is worth at present 30*l.* per fm. The 12 fm. level end is improved—it is at present worth about 18*l.* per fm. At Clon Mines, we have commenced another level, about 20 fms. further south than the one at present driving; we see traces of a burrow near this place, but, from its appearance, it has been removed to this from some other part of the land, and the shafts closed up, and the land cultivated; the adit end east is without alteration. We have commenced to sink flat-rod shaft under the 28 fm. level; it will be detained a few days in fixing lift, &c.—T. ANGOVE: March 11.

BEDFORD UNITED.—At Wheal Marquis, we are still driving north in the 80 fm. level; the lode in the stopes, in the back of this level, is still worth 25*l.* per fm. The lode in the 70 fm. level east is 2½ ft. wide, producing saving work, but not rich. There has been no lode taken down in the 58 fm. level east. At Liscombe, we have got into the south lode (although with great difficulty, owing to want of air), and find it to have been driven on east of the cross-course for about 12 fms., and tributers have rose about 9 fms. in the back; judging from the ground taken away by the tributers, there must have been several tons of ore returned; the lode will average about 3 ft. wide, composed of capel, spar, and ore, altogether a very kindly lode; we hope in the course of a few days, after the air-pipes, &c., are put in the cross-cut, to commence driving this level. The sumpmen in the south engine-shaft are still engaged cutting plat. In the adit level east there is no alteration.—J. PHILLIPS: March 13.

CLAYTON.—We have cut another lead lode in the cross-cut, which is looking promising; the copper lode continues much the same as when last reported.—SAMUEL BONSALL: March 17.

COOK'S KITCHEN.—Chapple's lode, in the engine-shaft sinking under 180 fm. level, is large, and producing but little tin; in the 180 fm. level east, the part of the lode on which we are driving is 4 ft. wide, and worth 6*l.* per fm. In the 170 fm. level east, there is a fine-looking lode, worth from 10*l.* to 12*l.* per fm. In the winze, sinking from the 148 to the 160 fm. level west, the lode is large, and much the same as when last reported; in the rise, in the back of the 160 fm. level east, against new east shaft, the lode is worth from 5*l.* to 6*l.* per fm. In the 148 fm. level east, we shall finish cutting the plat in about a week, and shall then drive the level about 3 fms. further east, in order to get out of the way for sinking the new east shaft. In the 92 fm. level west, on Eudy's lode, an improvement has taken place since the last report, the lode being now worth 15*l.* per fm. In the 80 fm. level, on North Tincroft lode, we have driven east to within about 8 fms. of the boundary, and are now driving south, for the purpose of intersecting a part of the lode, which was worked on, to a small extent, in the 50 fm. level. In the present month we shall, in all probability, get a good parcel of tin—of which, about 16 tons will be sent to the smelting-house on Saturday next.—JOSEPH VIVIAN. March 15.

CUBERT SILVER-LEAD.—The 25 fm. level cross-cut, driving north towards the lode, is at this time wet and hard; the lode in the 25, going west, is 1 ft. wide, chiefly spar, with mundic, and a little lead; the lode in the eastern end here is 3 ft. wide, 1 ft. of which is good saving work—a promising end. In the 15 fm. level the lode is 18 in. wide, of rather a hard nature—spar and lead; we have suspended this level until the end of this month, when we intend sinking a new shaft from surface on that part; just now, there is too much surface water to commence—the same men are put to sink Henry shaft, with the two men there before, to communicate this shaft with the 25 fm. level. The lode in the 15 fm. level, going east, is 2 ft. wide, producing some rich work—this also is a very kindly end; at this point, we have reached Sir R. R. Vyvyan's lands. The tributers are all working well, and, on the whole, they have fair prospects.—R. ROWE: March 12.

DARTMOOR CONSOLS.—I send you a rough sketch of the Dartmoor Consols Tin Mine—at the same time, I do verily believe it to be the best speculation in the county of Devon as a tin mine. As to speculation, to persons who have never seen the mine, it is right; but to me, and others who know and have seen the mine, there is not the least doubt but what it is a sure take and a lasting property—neither do I hesitate to say so. It is my real opinion, as soon as there is an entrance made into the mine on the great south lode, you will be enabled to keep a dozen stampers stamping tin, and the smelting-house continually smelting tin—moreover, there are two other splendid tin lodes, only 17 fms. further north of the great south tin lode; and I have no doubt but what they are as good a lode as the south lode is; I cannot see any reason why it should not be so. The middle lode has been cut, and produces good large stones of tin at the adit level; and the north lode is worked away by the ancients, or old men, to a very great extent on the backs; and these lodes are underlaying south, and in a most beautiful strata—being a decomposed soft granite, which composition is felspar, quartz, and mica, and that is the mother of tin.—JOHN FLOYD: March 13.

DEVON AND COURTENAY CONSOLS.—At the engine-shaft, south lode, there is no alteration since last reported; we have set the cross-cut at 6*l.* per fm., and purpose next week to commence driving. In the adit, south lode, there are four men driving at 6*l.* 10s. per fm.; the lode is 18 in. wide, with some good stones of copper ore. In the flat-rod shaft, north lode, we have nine men engaged in sinking at 9*l.* per fm.; the lode continues in size as before reported (about 4 ft.), with some good stones of copper ore, and an abundance of mundic, and looking, upon the whole, very promising. In the adit, north lode, there is no material alteration since my last; the flat-rods are working remarkably well.—JOHN JOB: March 16.

DYFNGWM LEAD MINES.—Dyfngwm Mine is situated near the summit of a ridge of mountainous ground, half-way between Machynlleth and Llanidloes—the turnpike road passing within a few paces of the sett, and not more than 400 from the mine. The district in which the grant is situated, contains some very large and productive mines; among which, may be reckoned Esgair galid, Delivé, and Esguirhir. It is the apex of the Snowdonian range, and the veins are large and well defined, as they usually are in such districts. The surface is principally covered with peat, and lakes and mountain brooks are numerously scattered along the line of hills, forming a valuable supply for water machinery. With respect to levels, the mine is placed 200 ft. above the level of the sea. The carriage of the produce is all down hill, the shipping port being Derwent-las, on the River Dovey, three miles below Mackynlleth, the price about 10s. per ton. The locality of Dyfngwm is immediately to the west of Esgair galid and Delivé, the former in the possession of Messrs. Pugh and Williams, yielding fair profits, and the latter an ancient mine, which, from the evidence on the surface, was formerly largely productive. In Dyfngwm Mine, the lode which has been recently attacked, is the Delivé vein. It is about 4 fms. to the south of the Esgair galid lode, which has not been seen in this ground, except on the surface, and where it has been broken through by the Dyfngwm adit mouth. The Delivé lode in Dyfngwm Mine has been reached at a depth of about 40 fms. below the surface of an adit level drawn across the country to it, from a brook in the ravine to the south of the lode (the surface portion of the vein having been worked time immemorial.) At the depth of 40 fms. from the surface, where the lode has been for some considerable distance to the east and west of the cross, by the adit level it seems to have yielded a great deal of ore; and in the 15 fm. level, under the adit driven some 40 fms. east of the engine-shaft, the backs yield in places as much as two tons to the fm., and westward, near the shaft, the vein is large and productive; and the bottoms, sunk under this level some 40 or 50 fms. west of the engine-shaft, yield good steel-grained ore. The 22 fm. level has been driven about 30 fms. east of the engine-shaft, and is under a winze nearly holed to it, yielding about 1½ ton of ore to the fm.; and westward of the engine-shaft, the lode in this level yields some good ore in the north side of the working. I believe this 22 fm. level, if driven westward, would go under some good ore bottoms, or underhand stopes before-alluded to, as containing steel-grained ore. The Esgair galid lode, as seen in Carfarthia, is of immense width, say 30 ft., rising up from the bed of the brook in great strength of crystallization, and yielding some very fine ore. This lode might be crossed with a cover, of from 40 to 50 fms., by driving the Dyfngwm adit northward 40 fms. In giving an opinion as to the value of the sett, I rely with great confidence that this mine will eventually be found a very great and profitable one. I consider that the average ground laid open by the level driven through it in the upper section of the sett, will barely pay for working; the spots of ore, though good in places, are not continuously so for any distance, but they afford evidence of a strong lode, which, I am of opinion, will be found charged with ore, in depth much more solid in its nature, and of much greater extent in its deposit; and, notwithstanding the upper section of this lode, is not so fraught with solid ore, as I believe it will be found below: nevertheless, I should recommend that the Dyfngwm adit should be extended to it; because, since it is so productive in Esgair galid, it is not improbable that it will lay open profitable ore ground, but also, that it will unwater the upper portion of the lode, and afford facilities for the application of power for the systematic working of the mine. No great skill has been hitherto shown in the arrangements for mining this piece of ground. The wheel, which is an oak one, 40 ft. diameter, 2 ft. breast, is placed in the ravine below the adit level; it draws skins of rods with a cambrious bob, and all adjusted pit-work. The line of rods is taken along the adit under a good light iron railroad; there is a small drawing machine attached to the rods to haul the stuff, and a good 18-inch crushing mill attached to the wheel for reducing the ore; the wheel would have been much better situated on the dip of the hill, near the back of the lode, where the same stream might be conveyed; and this arrangement would do away with great disadvantages, as to drawing, waggoning, carriage, and application to pit-work, reducing a complex to a simple system. In order to lay open this mine fairly, an engine-shaft should be sunk from the surface, so as to command the two lodes at some considerable depth, say 150 fms. from the surface, or 100 fms. below the adit level, which, with the proper application of machinery, would cost about 5000*l.*; levels boldly extended from the shaft, I have no doubt, would lay open bodies of ore, which would leave very large profits. I would make an additional allowance for this, say 200 fms. of level of 1500*l.* With a capital of (say) 7000*l.*, and a well directed and economic system of operation, I have no doubt that Dyfngwm would become a large and profitable mine. I have studied the nature of such lodes in positions similar to this of Dyfngwm; and the examples I have read, have led me to the conclusion, that although the lodes are large and coarse at the surface, and the metals strongly smitten with blende and sulphur, yet in depth they become more purified and available for working; and I feel no compunction or wavering in my mind, in recommending the application of such, or even a greater capital than I have named, for fairly developing the resources of the Dyfngwm Mine: I rest satisfied that they will be found sufficient to repay the adventurers their outlay, and to leave a very handsome surplus for a long series of years.—MATTHEW FRANCIS.

EAST CROWNDALE.—The ground in our engine-shaft still continues very hard; the same bed of spar mentioned in my last report holds on in the bottom of the shaft, but I hope from appearances that we shall soon get through it—the shaft is now down 34 fms. 4 ft.; we have in the past week cut through the lead lode to the western wall—it is 5 ft. wide, composed of flookan, mundic, and some good work for lead. In our adit level, towards the Rise Hill lodes, the ground still continues very favourable for driving; I expect we shall intersect our lead lode in this level before the end of another week—our engine and pit-work are all in good order.—S. PAULL: March 14.

EAST TAMAR CONSOLS.—At Whitson, Hitchins's shaft is sunk 5 ft. under the 60 fm. level. The lode in the 60 fm. level, north and south, is 20 in. wide, producing good work. The 54 fm. level south is in disordered ground; we have commenced clearing up Gourd's shaft under the 36 fm. level, which will open some tribute ground. At Furzehill, Harrison's shaft is sunk 4 ft. under the 46 fm. level, lode 2 ft wide—fluor-spar, and silver-lead ore, a very kindly lode. The lode in the 46 fm. level north is 2 ft. wide—fluor-spar, and some good stones of silver-lead ore; the lode in the 46 fm. level south is 20 in. wide, good saving work. The lode in the 38 fm. level north is 1 ft. wide—fluor-spar, and ore; the lode in the 38 fm. level south is 15 in. wide, producing very good work.—B. ROBINS: March 16.

EAST WHEAL FORTUNE.—*Kea, March* 16.—We have commenced a shallow adit on No. 3 lode, about 120 fms. west, where we have the branch of tin mentioned in our last report, driving from Blamey's to Hocking's shaft; this lode is from 18 in. to 2 ft. wide, having a very rich leader of tin, varying from 2 to 4 in. wide, and holding well in the bottom—the lode produces good work throughout; this level is exploring the lode, and gives a depth of about 15 fms. deeper than the level aforementioned, from Blamey's to Hocking's shaft; and, from its present appearance, it is likely to make considerable returns. No. 4 is a large lode, distant only about 6 fms. north from No. 3 lode, which we intend intersecting from this level. We are continuing the deep adit from the south-west boundary in a north-east direction, which will intersect the whole of the lodes, and give a still deeper level of about 16 fms.; from its present end to No. 2 copper lode is about 23 fms.—R. WOOLCOCK.

EAST WHEAL SETON.—Our engine-shaft is now down 31 fms. from surface on the lode, which is at present unproductive; we shall at once extend the levels east and west—it being the depth of the adit; in driving east, in this level, about 15 fms., we expect to get under the ore ground, driven through in the 24 fm. level, which level we have driven east about 15 fms. from engine-shaft; the lode in this level has been worth, on an average, for the last 10 fms., about 7*l.* per fm., and there is at present a good-looking lode in the end; the 24 fm. level west is stopped, until the 31 fm. level shall have been driven; our tributers are getting fair wages. We shall sample about 65 tons, or 350*l.* worth of ore, on the 16th inst.; these ores were raised in January and February. Within the last week, we have opened on the back of the lode 130 fms. west of engine-shaft; it is 3 ft. wide, containing good gossan, and has a very promising appearance. I am glad to say, that all that was anticipated from my last report has been fully realised; and that, on the whole, our prospects are much improved.—JAMES EVANS, Jun.

GEORGIA TIN MINES.—In compliance with your directions, I beg to forward for your inspection my report of the Georgia Tin Mines, in Towednack, Cornwall. These mines are situated in a rich mineral district; the workings near the surface on the different lodes (at least 11) are very extensive, but they have only been worked by manual and horse labour to the depth of 25 fms. from the surface; the lodes, however, even at this depth are rich—the tinstuff or ore, which I saw, being worth from 20 to 35 per cent. in black tin of the best quality. The mines are far from being fairly developed, but sufficiently so, to justify me in saying, that an additional capital of 5000*l.* for the erection of a draught engine, of from 24 to 30-inch cylinders, pitwork, stamping-mills, dressing-floors, buildings, and for the exploring of the depths of the different lodes, would place these mines in a position so as to secure dividends on the capital employed, which would, without doubt, render them highly profitable for a very long period. The ground upon which they are situated is of the most favourable description; and the lodes being so contiguous, great results may very reasonably be expected, in a comparatively short time. Taking everything into consideration, with respect to the number and character of the lodes, the length of tin ground already discovered, the character of the tin found there being of the best quality, the junction of lodes, and the ground throughout being very favourable for working as to cost, it is not too much to expect that these mines will prove equal in richness and extent to any in the district. In closing my report, I beg respectfully to state, that in my experience of 38 years, I have not seen a mine presenting better prospects.—E. THOMAS: March 16.

GREAT MICHELL CONSOLS.—The engine-shaft is down 9 fms. 2 ft. 6 in. below the 22 fm. level, the lode in which is composed of mundic, fluor-spar, and good stones of ore.—T. RICHARDS: March 16.

GREAT WHEAL MARTHA.—The new engine-shaft is now down 41 fms. below the adit; we have now to square the shaft, fix bearers, and put in cistern, all of which we fully expect to get completed by Saturday next—after which we shall commence to cut a plat, and drive a cross-cut to intersect the lode—the nature of the ground is just the same as last reported. On reference to former reports, you will perceive that we have completed sinking the shaft 41 fms. below the adit level, about one month sooner than was anticipated. The lode in Sherrall's Bottom continues a regular course, and is about 3 ft. wide—the capel is hard, which is most kindly for tin; the lode is not yet quite in a settled state, but we trust it will improve as we increase in depth.—T. PENALUNA: March 13.

GUNNIS LAKE.—At Chilsworthy, Bailey's engine-shaft is 6 fms. 2 ft. 6 in. under the adit level, lode 3 ft. wide, producing good stones of yellow and grey copper ore. The lode in the 12 fm. level west is 2 ft. wide, composed of gossan, capel, and spar, with spots of ore in places; in this level east there is no alteration.—W. RICHARDS: March 16.

HANSON.—In the 32 fm. level, east of engine-shaft, is now through the slide, the lode is 2½ ft. wide, 8 in. of which is saving work for ore—it is a very kindly lode. In the back of the 22 fm. level, east of engine-shaft, will produce about 1½ ton of ore to the fm. We shall sample on the 16th inst., something more than 42 tons of ore—the parcel will be marked 43 tons.—Z. WILLIAMS: March 15.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, has assumed a more promising appearance than for some time past, being upwards of 2 ft. wide, producing good work for tin, and promising speedy improvement.—P. RICHARDS: March 16.

HERODSCOOMBE.—We have driven 12 fms. on the course of the lode; I find it in the south end 1 ft. wide, composed of gossan, spar, flookan, and good stones of lead; in the north end, of about the same composition, and 1½ ft. wide. I have taken from the north end this afternoon a stone of gossan and lead, about 1 cwt. of the prettiest nature that ever I saw raised from the bowels of the earth—I shall send it to Liskeard the first opportunity; this was about 18 fms. long in the level above.—JOHN MEDLEN.

HERODSFOOT.—I have sent off 25 tons of lead, and am also happy to say, there is an improvement in our south bottom end; after having driven through 9 fms. of dead ground, we have the lode again, and I find it to be 1½ ft. wide, of which I have sent you a stone, worth 14*l.* per fm.; in the north end no alteration since my last report; other places just as heretofore.—J. MEDLEN.

HOLMBUSH.—The diagonal shaft is sunk about 8 fms. below the 120 fm. level, the ground in which is still favourable, and the branches just as usual as to size and appearance, but rather more inclined towards the south side of the shaft; the lode in the 120 fm. level, west of the great cross-course, is 10 in. wide, composed of mundic, spar, and stones of ore; the pitch, in the back of this level, is producing a fair quantity of ore, and the men are getting fair wages; the lode in the 120 fm. level, east of Hitchins's shaft, on the north part, is 18 in. wide, composed of spar, mundic, and spots of ore. The lode in the 110 fm. level, east of Hitchins's shaft, on the south part, is 8 in. wide, composed of spar and stones of ore; the lode in the 110 fm. level south, is 20 in. wide, composed of prian, soft spar, and spots of lead. The lode in the rise, over the 100 fm. level south, is 6 in. wide, and worth 10*l.* per fm.; in order to resume driving the 100 fm. level south, on the lead lode, as well as to continue rising, we have fixed an air-machine in the level, which affords a sufficient quantity of air for both purposes, until a communication be made to the level above; to continue driving this level is of great importance—not only to open and prove the ground on the lead lode, but to intersect the Flapjack lode, which, agreeable with the general direction, is about 9 fms. south of the present end. The lode in the 90 fm. level south is 2 ft. wide, composed of spar, flookan, and spots of lead.—WILLIAM LEAN.

ILAM.—In accordance with your instructions, I have visited the [illegible] Mine and inspected the several workings, more particularly the discoveries which you directed my attention. It will be necessary to explain this report by reference to plan and sections, which I have prepared, as also to illustrate them by specimens taken from the lode, and the country, or rock, all of which are submitted herewith. As regards the workings, I find that Robins's shaft has been sunk to a depth of 67 fathoms on the dip of the lode, and that at about 42 fms. a cross-cut has been put out north, to see the nature of the country, and, moreover, to intersect any strings, or droppers, from the lode, which are observable in the shaft. In driving some 4 or 5 fms., north from Robins's lode, they have met with a bunch of ore, which has every appearance of being a distinct lode, if it be not a branch going off from the main lode at a higher level; the workings here, however, are not sufficient to warrant an opinion—

the north wall not being yet taken, but as the ground is being explored, the result will be known in a few days; I should recommend opening on the lode east and west, and also to drive out at the 67 fm. level on the caunter, or new shaft, lode, so as to intersect it, which will prove whether the bunch of ore holds down. From assays made, I find that it produces 84 per cent., and by an assay of a stone, since submitted to Mr. P. N. Johnson, 28 per cent.; and, from the nature of the stone herewith, forming part of a rock broken of 3 or 4 cwts.; it will be seen, from the gossan and kindly spar with which the ore is intermixed, there are good grounds for assuming, not only that it will hold in depth, but that it will make a "bundle" of ore even at a shallow level, as in the Ecton Mine, which is in the immediate neighbourhood—nothing definite can, however, be said, until the workings are further extended. At the new shaft nothing is doing, the water beating them; but I found that within the past three days it had dropped nearly 3 ft. I have recommended the suspension of operations on the lead lode in the cavern, as such will be intersected by driving on Robins's lode, at the 67 fathom level. In sinking on Robins's lode, which has a promising appearance, with stones of ore in the bottom, there is a change of ground which is considered favourable, and I recommend the shaft should be carried down another lift; but which is not, however, of immediate moment. The other points, to which I have to direct your attention, are the driving on Robins's lode, east and west, at the 67 fm. level—so as to form a communication with the cavern, whereby ventilation will be obtained, as also an outlet for the coming water, and as the caunter, or new shaft, lode will be found to intersect Robins's lode in driving on the latter, I would recommend that a pare should be put on—so as to come under the new shaft, and thus facilitate the workings and unwater the shaft, so that it may be sunk to meet the level driven from Robins's shaft. By carrying out these several points, it will be seen that every fathom of ground wrought is on the lodes, if not in orey ground. The extent to be driven between the two shafts is about 40 fms., to sink the new shaft 16 fms., to drive on Robins's lode, assumed 20 fms. east and west, to drive to take the north lode, or "bunch," 4 fms., to extend on the lode and drive out cross-cut say 20 fms., and to sink Robins's shaft, 10 fms. These several workings will be attended with a cost, as per estimate accompanying the present, of 900*l.* to 1000*l.*, and will occupy from 8 to 10 months. In this I have included agency, and the purchase of timber for a 12 months' supply, as also tram plates, which I would recommend for underground as saving cost. In making the foregoing estimate, I have assumed that no returns of ore will be made in the interim; but, judging from the indications which present themselves, and the ore in sight, I have no hesitation in expressing my opinion, but that the returns will render any further outlay beyond the present resources unnecessary, and thus preclude the necessity of the outlay suggested. This, however, is an opinion, which I should not wish to bias you; but that you should contemplate the assumed expenditure of time and money. I beg further to suggest rather, the propriety of acquiring the adjoining property, and putting down a shaft or costeaning the ground—so as to ascertain the nature of any lodes which may be found, as such would be a guide for future operations. I have, subject to your approval, given directions for the several workings suggested, and shall be happy to afford you any further information which you may require.—H. English: March 16.——I have put on four men in the end, east of Robins's shaft, in accordance with your desire, and six in the end going west, where the lode is looking very kindly—indeed, much better than I anticipated in so short a distance of driving. The end, north of Robins's lode, is not looking so well as last week; but there is an improvement since yesterday morning, having broken into ore ground in the bottom of the end. The water in the new shaft has sunk about 2½ ft. since I last wrote. The mine is looking well, particularly at bottom of Robins's shaft.—J. Sprague: March 17.

LLANCYNFELIN.—The men are engaged sinking the engine-shaft down 4 fms. 3 ft. below the 18 fm. level—price, 11*l.* per fm.; the cross-cut still continues hard for driving, but we expect to hole the latter part of the month; the lode in the 18 fm. level, east from Johnson's winze, is small, but producing good stones of silver-lead ores; in the stopes, in the back of the 18 fm. level east, the lode is not taken down; in the stopes, in the middle winze, the lode is 2½ ft. wide, worth 12*l.* per fm. In the west stopes, in the bottom of the 8 fm. level, the lode is 18 in. wide, worth 13*l.* per fm.; in the east stopes the lode is 2 ft. wide, worth 17*l.* to 18*l.* per fm.; in the west stopes, in the back of the 8 fm. level, the lode is 2 ft. wide, worth 12*l.* per fm.; in the stopes, east of the rise, the lode is 2 ft. wide, worth 6*l.* per fm.; in Jones's adit the ground is favourable for driving—extended 15 fms. We have a large quantity of lead ores broken; and, so soon as the 18 fm. level is communicated with the engine-shaft, we shall have two horse-whims constantly working—having now only one, which is insufficient for raising all the stuff and ores. I am happy to inform you, that the stopes present a most favourable appearance, and have greatly improved during the past week. The drawing lift has been working for the last fortnight; and we hope to have Fearon's, and the stamps, both in operation in about four weeks.—John Treweek: March 17.

MENDIP HILLS.—Stainsby's shaft is sunk 19 fms. below the 38 fm. level, the lode at this point is become smaller, being at present about 1 ft. wide, composed principally of quartz and iron. In the 38 fm. level, driving south of shaft, we are at present extending our end on the foot-wall part of the lode, the appearance of which is much the same as it has been for several fathoms past, composed of quartz, flookan, and particles of lead. In the slag department I have nothing new to inform you this week.—F. C. Harpur: March 15.

PENTUAN WHEAL MARY.—On my visiting Pentuan Wheal Mary today, I found that the lode alluded to in my last letter still maintained its promising character as we sunk on it in the pit where it was first discovered; this place has been suspended, and the men are now employed in driving an adit from the bottom to intersect it, which I hope will be done this week, as the distance is short, and the ground very favourable (20s. per fm.); after this, we shall drive west on the course of it, and, from the natural advantages we have, we shall soon be able to prove it some considerable depth, without the aid of machinery; next week I hope to be able to inform you, what appearance it presents at the adit level.—J. Hitchens: March 15.

SILVER VALLEY.—The silver lode in the 20 fm. level west is at present a little short of 2 ft. wide, but is improved in quality, 7 in. of the south part contains some rich work—and from the produces of the samples, and the present appearance of the lode, it is worth from 27*l.* to 30*l.* per fm.; the ground is very favourable, but I regret in stating that, for want of ventilation, we can progress but slowly—however, as we have one man rising in the back of this level, and four men, who will commence sinking from the 10 as soon as the level is repaired, we hope to communicate, in four or five weeks from this time, after which we shall be able to work to an advantage, both in driving and stoping. In the 10 fm. level east, the lode is still divided into branches by disordered ground; these branches, and also the killas, or horse, between them, present traces of lead, and particles of silver, but not worth saving. At Wheal Brothers, in clearing the deep adit towards Oak shaft, we have found a little silver in the bottom of the level; and, although the greater part of the ground here is worked away, we shall be able to raise some work from the arches of ground left by the former company; and from the many promising indications at Oak shaft, we do hope that our expectations, respecting the this piece of ground, will be realised. At Wheal Sisters, the lode in the shaft, sinking below the shallow level, contains a little silver, but not rich; in this level east, the lode has a very promising appearance; indeed, for many fms. in length, a north branch is approaching the main part going downward, and will form a junction not far below the bottom of the level.—S. Richards.

SOUTH DOLCOATH.—The engine-shaft is now completed to the 30 fm. level; the summen are now opening a plat, which, when they have completed, they will commence sinking again, to go down to the 40 fm. level, before we drive other levels east and west on the course of the lode. The 20 fm. level east has still a very promising appearance, with occasional good stones of copper ore; the 20 west has more gossan in the lode, with some cavities, in which we find some rich, black, and grey ore; the lode is very kindly, but we must go deeper to find much ore.—W. Paul: March 15.

SOUTH WHEAL MARIA.—The ground in the shaft continues favourable for sinking; we calculate, that at the rate we are now getting down, to complete it to the 30 fm. level about the middle of next month, when it is intended to cross-cut north. The first lode north of shaft, on which an adit has been driven upwards of 50 fms., will be seen in driving about 6 fms.; and the second, which has produced some good tin near the surface, with a nice prian, from 4 to 6 ft. big, is about 30 fms. north of shaft. There is now a very pretty prian branch in the shaft, with spots of copper in it, underlying towards the lodes south of shaft, 3 ft. in a fm.; and I beg to say, that I never saw a more promising killas to produce a course of ore than there is in the shaft at the present time.—George Francis: March 18.

SOUTH WHEAL TRELAWNEY.—The ground in Snell's engine-shaft is much the same as last reported on; during the past week, the men have been engaged in fixing the lift of pumps to draw the water, with a crank on the top of the horse whim, which answers the purpose intended as well as we could have desired. Soby's lode, in the adit level south, is 2½ ft. wide, composed of gossan, soft killas, mundic, and sprigs of lead. The account-house, smiths' and carpenters' shops, are built, and the covering nearly all put on; the engine-house will be finished within a fortnight from the above date, should the weather continue favourable as at this time, which is very fine for building purposes. On Tuesday next, we shall arrange with the master of a vessel, known by the name of the *Friend's Desire*, about freight, &c., of the engine from Portleaven to St. Germans; and we hope to have every part of the engine on the mine within a fortnight. I have written the agent at the Hanson Mines to get everything in order on the quay at Portleaven, that no delay takes place.—William Lean: March 13.

TAMAR SILVER-LEAD.—In the 160 fm. level, south of the shaft, the lode is 2½ ft. wide, composed of capel and ore, yielding work of a promising character. In the winze, sinking below the 145 fm. level, the lode is 2 ft. wide, good stamp work; in the 145 fm. level south, the lode is small, and at present poor. In the 135 fm. level ditto, the lode is 1 ft. wide, producing work of a coarse quality. In the 125 fm. level, the lode is disordered by a slide course. In rising, in the back of the 35 fm. level, the lode is 18 in. wide, interspersed with ore throughout. In the 160 fm. level end, north of the shaft, the lode is 6 in. wide, good work. In the 145 fm. level north, we have not broken any lode since last report. At North Tamar, in driving north, in the 70 fm. level, the lode is small, and unproductive. In the 60 fm. level end north, the lode is 3 ft. wide, composed of can, capel, and ore, saving work; in the same level south, the lode is 3½ ft. wide, producing work of a promising description. We sampled on Friday, the 5th inst., 98 tons 11 cwts. 3 qrs. of rich silver-lead ores.—James Sprague: March 15.

SOUTH TAMAR UNITED.—Monday's shaft is cleared and secured to the back of the adit level; the engineers are very busily engaged in putting in the machinery.—B. Robins: March 16.

TRETOIL.—Our tutwork operations are at present confined to the driving of the cross-cut, south of Russell's shaft, in the 40 fm. level, and sinking under the bottom of the adit on the Mine Park lode; there is no alteration worth notice since last report. We sampled, yesterday, at Wadebridge, 53 tons of ore.

TINCROFT.—In consequence of the water being so quick, we have not been able to do anything at the 100 fm. level since my last report, though now we are gradually forking the water below the 90. I hope in a short time to be able to work at the 100. The south lode in the 90 east is 20 in. wide, with occasional stones of ore; the 90 east on north lode is producing some good stones of ore; the same may be said of the west end, on same lode; beyond each of these ends we have a good lode, where we are sinking below the 80 fm. level. We have suspended the 80 end east, and have put the men to open on a lode, which has recently come in from the south, in which we have good work for tin, worth 10*l.* per fm.; the lode in the 80 west is 3 ft. wide, producing 3 tons of ore per fm., worth 6*l.* per ton; the lode in the winze, sinking on this end from the 70, is 3 ft. wide, orey throughout, improving as we sink. The lode in the 70 west is disordered and unproductive. The lode in the 60 west is 2 ft. wide, producing some good work for tin, with some copper ore, and very promising. The 50 end west is producing 1½ ton of ore per fm., worth 6*l.* per ton. I can speak of no particular alteration in the tribute department in this part of the mine. The water is in course of forking at Palmer's; we have now 6 men working there on tribute—4 men at 3s. in the 20s., and 2 men at 10s. in 20s. We are also driving west on the south lode, in the 38 fm. level, where we have some ore in a very promising lode. We hope to get more men to work in this part of the mine in a week or nine days. At South Mine, on Highburrow lode, the lode in engine-shaft, sinking below the 152 fm. level, is 3½ ft. wide, good work for tin, worth 50*l.* per fm. for the length of the shaft, which is 12 ft. The lode in the 152 west is 2½ ft. wide, worth 10*l.* per fm. The lode in the 142 east is 4 ft. wide, worth 12*l.* The lode in the winze, sinking below the 120, is 4 feet wide, worth 12*l.* per fm. for tin and ore; the lode in the 120 east is 4 ft. wide, worth 10*l.* per fm. The lode in the 110 east is 20 inches wide, worth 6*l.* per fm.; here we are driving on a branch to the south of main lode, in order to get forward as quick as we can, to unwater a winze in the bottom of the 100. The stopes in the bottom of the 100 are worth 20*l.* per fm. Our pitches in this part of the mine continue to yield fair quality tinstuff. Chapple's lode, in the 90 west, is worth 40*l.* per fm. The pitches in the back and bottom of the 100 are producing excellent work for copper ore. We shall not be able to sample any of it on Wednesday next; but we hope to get near 400 tons from other parts of the mine, though East Pool lode has been cut off from us for this sampling. At Wheal Providence, we have about 15 fms. more to clear the adit to get to Wheal Providence lode (Druid lode in Carn Brea Mines, now very rich); we hope to accomplish this in three weeks, or a month; we have cleared a shaft (to the end of engine-shaft) 12 fms. from surface, but can go no deeper till the water be let down. You must be aware that our monthly cost is increased full 150*l.* per month by our working this part of our sett; but I consider that the prospects we have before us fully warrant the outlay.—W. Paul: March 15.

TRELEIGH CONSOLS.—In the 110 cross-cut, at Christoe's, we are driving to cut the lode; in the 110, east of ditto, lode 2 ft. wide, rather in a disordered state, with stones of ore. In the 110, west of ditto, driving south-west in the country. Garden's shaft, below the 90, sinking in the country—hard ground; in the 90, west of ditto, lode 20 in. wide, producing stones of ore, not to value. In the 80, west of ditto, lode 2½ ft. wide, with a small quantity of ore—we have driven through the cross-course; in the 80, east of ditto, lode 2½ ft. wide, worth 30*l.* per fm. In the 70, west of ditto, lode 2 ft. wide, but very little ore. In the winze, below the 60, lode 2 ft. wide, producing stones of ore. In the 70, west of Good Fortune, lode 3 ft. wide—capel and ore, worth 8*l.* per fm. At Symons's shaft, below the 60, lode 3 ft. wide, producing a little mineral, not to value. In the winze, below the 44, lode 15 in. wide—mundic, with stones of ore. In the 20, west of Symons's, lode 1 ft. wide, poor for ore.—W. Symons: March 16.

UNITED HILLS.—In the 90 fm. level, east of Williams's shaft, the 90, west of do., and the 90 stopes, west of Williams's, there has been nothing done during the past month, in consequence of the water. In the 80, east of Williams's shaft, the lode is 3 ft. wide, worth 14*l.* per fm. In the 70, east of eastern shaft, the lode is 2½ ft. wide, worth 7*l.* per fm. In the 80, west of cross-cut, west of Williams's, the lode is 18 in. wide, worth 15*l.* per fm.; in the stopes, in the bottom of the 70, west of eastern shaft, the lode is 3 ft. wide, worth 20*l.* per fm.; in the shallow adit end east the lode is 2½ ft. wide, producing but little ore. At Wheal Charles, in the 50 fm. level, east of Gibsons's shaft, the lode is 2½ ft. wide, producing some stones of ore. In the 40 fm. level, east of ditto, the lode is 3 ft. wide, worth 12*l.* per fm.; in the winze, under ditto, the lode is 6 ft. wide, worth 12*l.* per fm.; in the stopes, back of ditto, the lode is 3 ft. wide, worth 18*l.* per fm. At Wheal Sparrow, in the 40 fm. level, west of Turner's shaft, the lode is 2 ft. wide, worth 6*l.* per fm.; in the stopes, back of ditto, the lode is 2½ ft. wide, worth 3*l.* per fm. In the 30, west of Turner's, the lode is 8 ft. wide, worth 15*l.* per fm.; in the adit, west of Turner's, the lode is 1 ft. wide, poor.—T. Trevenen; R. Williams: March 12.

WEST UNITED HILLS.—The lodes on which the adit has been extended about 200 fms. east and west, is large (in some places so much as 7 ft. wide), composed of arsenical iron pyrites, chlorite, quartz, jack, and stones of copper ore. I call it a very promising lode; indeed, I may say, that I have seldom, if ever, known, such a character lode to fail of making a quantity of copper ore in depth—therefore, my unbounded opinion is, that the lode in question fully warrants the erection of a steam-engine. While on the mine, I examined the stuff from another lode to the north, composed chiefly of jack, with some copper ore—this lode, also, I consider is worthy your attention; the deep adit, however, now going on, will intersect it 30 fms. from surface; this will enable you to decide more easily as to its character and prospects; the sett, which is extensive, with the lodes already seen in it, will bear the inspection of any practical mine agent. I wish you every success in your future operations.—W. Paull: March 13.—[The many conflicting reports and rumours that have been industriously circulated relative to the above mine, induced a gentleman, largely interested, to have an inspection for his own guidance, by an unbiassed and efficient practical agent. The selection having fallen upon Capt. W. Paull, of Tincroft Mines, in whose judgment we place implicit confidence, we feel pleased to find so highly favourable a report, after the many which have been put in circulation, having so injurious a tendency. Upon reading the above, we cannot avoid fearing that too much spleen, envy, or ill-feeling, has been maintained against the *mine*, whilst it was intended to expose the *man*.]

WEST SHEPHERD.—We have driven our 20 fm. level 22 fms., which is rather more than we calculated upon, to get in contact with the shoot of lead ore gone down in the 12 fm. level above. In driving the 20, we have passed through several small shoots of lead, which sometimes formed a leader, or branch, 8 in. wide, but did not continue going forward more than 2 or 3 days, driving in the end, but continuing in the back and bottom. A fortnight since, we commenced sinking a winze in the level above, through the ores, where the lode is found to be worth 10*l.* to 12*l.* per fm. each side of the winze; cost for sinking the winze, 3*l.* per fm—after the winze is holed to the 20, the same ground can be worked for 18s. per fm.; by the time the winze is down, the 20 end will get in with it. As the 20 end advances towards the winze, we find the lode and ground around it becoming much more favourable—thus giving evidence that the shoot of lead is continuing down; the price has varied from 5*l.* 10s. to 3*l.* 10s., within the last few weeks, in driving the 20 end. From the improvement of the lode in the winze, which is now 4 fms. deep, there is every reason to believe, that we shall get into the same run of lead ground by driving, perhaps, about 5 or 6 fms. more in the 20. The eastern end is still poor, but here and there are to be seen small deposits of silver lead ores; the end has kindly indications. The mine is now in a favourable state. By the ground we are now opening, we are paying double the present cost of the mine.—Daniel Skewes: March 17.

WEST WHEAL JEWEL.—In the 115 fm. level, east of cross-cut, of Wheal Jewel lode, lode 20 in. wide, composed of mundic, and soft spar, with more ore in it than when last reported. In the 100 fm. level, west of cross-cut, on Wheal Jewel lode, lode 9 in. wide, ore throughout, worth 3*l.* per fm.; in the winze, in the bottom of the 100 fm. level, on the same lode, not taken down in the past week. In the winze, in the bottom of the 85, west of cross-cut, on the same lode, not taken down in the past week. In the 70 fm. level, west of Williams's cross-cut, on the same lode, lode 1 ft. wide, worth 5*l.* per fm. In the 12 fm. level, west of Quarry shaft, on Tolcarne tin lode, lode 18 in. wide, worth 12*l.* per fm.; in the winze, in the bottom of this level, lode 2 ft. wide, worth 28*l.* per fm. The stopes that we set last setting day, east of George's winze, on the same lode, is worth 12*l.* The stopes in the bottom of the adit end, east of Prior's winze, are worth 20*l.* per fm. The adit end, west of Quarry shaft, is worth 9*l.* per fm. In the 12 fm. level, west of old sump-shaft, on the same lode—the lode is worth 8*l.* per fm.—R. Johns: March 15.

WEST WHEAL MARIA.—The lode in the eastern engine-shaft is still producing good stones of ore; at the western engine-shaft, the summen are employed cutting bearer holes, putting in bearer and cistern in the 54 fm. level, preparatory to fixing 11-inch lift, which we hope to complete by the end of this week. In the 54 fm. level, east of this shaft, no lode taken down since last reported; in the cross-cut, in south this level, the ground is much the same, for driving as last week.—T. Rodda: March 16.

WHEAL ACLAND.—Since our last meeting, in July, 1846, the adit level has been driven west in Trendrain 90 fms., and one shaft sunk 8 fms.; it is a firm good adit not requiring timber, and the most that has been given per fathom is 20s. We thought to have cut Metha lode before this time, had it kept the same bearings as it did in Metha as far as it has been seen—this lode we consider to be a caunter to East Wheal Rose lodes, but it must have altered its course more to the west. We have about 15 fms. to drive to get into Trevenen's land; cannot tell how near we are to a lode, our end is much wetter than it has been; we think that in driving about 40 fms. we shall intersect a lode or lodes, which is thought by others, as well as ourselves, to be a promising piece of ground to drive through; our adit will, we suppose, be 12 fms. deep or more, and shall have another shaft to sink. We think 1*l.* per share call will do this work, and satisfy us with respect to the lodes in this part of the sett.—S. Lawry; J. Champion: Feb. 24.—[In the Journal of the 6th inst., we published the particulars of the meeting of shareholders, held at Pearce's Hotel, Truro, on the 3d.]

WHEAL AGNES.—The appearance of the above mine is just the same a last reported; lode 3 ft. wide, producing some good stones of silver-lead ore.—B. Robins: March 16.

WHEAL BENNY.—Ford's engine-shaft is down from surface 15 fms., ground favourable for sinking. We have sunk 4 fms. on Benny lode, east of cross-course; it is a strong champion lode, from 3 to 4 ft. wide, composed of spar, mundic, and copper—but have been obliged to suspend operations at present, owing to the quickness of the water. We have cut the lode on the common further east, and it looks very promising. We strongly recommend the immediate costeaning the untried ground, and think it advisable to put 6 or 8 men to explore the surface, being upwards of 500 fms. We have already discovered two lodes, and have every reason to beleive there are others to be found. On the whole, the appearances of the lodes already laid open, in conjunction with a beautiful and congenial strata, justify the most sanguine expectations.—T. Penaluna; J. Tabb: March 18.

WHEAL CONCORD.—There is no new discovery here since my last report; the lode in all the western levels produces good stones of lead. In the 28 fm. level west, a few fathoms behind the end, we purpose rising on the back of the lode, to ascertain how it may prove above that level, it being in whole ground; at present the lode is 2½ ft. big, producing some lead. In the stopes, in the bottom of the 10 fm. level, there are as many men raising lead as can conveniently work; the lode is fair as to produce, and I am using every effort to increase our returns; the parcel now dressed is about 16 tons, to which there will be a considerable addition in the course of the present month. Our workings are principally confined to the western ground, to which I attach considerable importance, with the view of discovering the south lodes in the 38 fm. level, and to take away the lead in the 10 fm. level—in fact, there are no more employed than are essentially necessary; I may add, that the cost for the present month will be considerably lower than those of late—the mine being more in a course of working, and certain surface works completed.—J. B. Clymo.

WHEAL LOUISA.—We are opening on the course of the lode, east and west of the cross-cut, in the 20 fm. level, the lode being full 8 ft. wide, and of a very promising character, yielding rich stones of yellow ore; and, from present appearances, I have not the least doubt of its producing large quantities of ore in depth, and would strongly recommend the sinking of the engine-shaft with all possible speed.—James Chynoweth: March 16.

WHEAL TRELAWNEY.—The lode in the 42 fm. level, north of Phillips's shaft, is 2½ ft. wide, and worth 22*l.* per fm.; in the same level south it is 3 ft. wide, and worth 30*l.* per fm. The lode in the 32 fm. level north is 2 ft. wide, and worth 18*l.* per fm.; in the same level south it is 2 ft. wide, and worth 15*l.* per fm.; in the winze, sinking under this level, the lode is 2½ ft. wide, and worth 22*l.* per fm. The winze, under the 32 fm. level north, is holed to the 42 fm. level; the stopes generally are producing fair quantities of lead. We shall sample to-morrow two parcels of ore; the crop will be about 64 tons, and the slimes about 16. We have resumed the sinking of the old engine-shaft under the 42 fm. level; and also Trelawney shaft, under the 22 fm. level, in very favourable ground for sinking. Our new 50-inch steam-engine was put to work on the 3d inst., and works remarkably well. We yesterday commenced sinking a new shaft, to the north of Wheal Trehane, by 6 men.—P. Clymo, Jun.

Dartmoor.—In our Number of the 6th inst., we gave a few statistical remarks relative to this highly-important district, tending to show the estimation in which it was anciently held for its mineral productions, or rather for tin—copper and lead being minerals at that period wholly unknown, or, at least, sought for—in all probability from the fact, that the lodes were not explored to a sufficient depth to ascertain the presence of copper, and the lodes carrying tin on their backs, which appears to be peculiar to the granite formations of Devon and Cornwall. And it may be assumed, from the shallowness of the workings of the ancient tinners, that they were incapable of sinking to any considerable depth, for the want of machinery, or the necessary appliances for keeping the water. This conclusion may be considered reasonable, from the appearances of very old mines, such as the Combmartin Mines, in the north of Devon, and the Mendip Hills, in Somerset, without naming others which are less known. Returning to the subject of Dartmoor, and its antiquity as a tin mining district, we are induced to refer to the opinion of a gentleman, who took an active and deep interest in the history of this celebrated Moor—"It is certain the Phœnicians traded largely in the west of England, from their being well acquainted with the abundance of tin on Dartmoor; that they were even concerned there in streaming for it, with the aid of the natives, whom they taught to erect dwellings." Very few documents are now extant to throw much light upon the character or habits of the ancient tinners, and perhaps none as to their system of working, or rendering the same marketable; we are, therefore, reduced to the necessity of adopting traditionary, with the documentary, evidence now in existence. It appears, that some importance must have been attached to the mineral productions of Dartmoor, to call for the adoption of laws and regulations, by which the tinners were to be governed and guided; for, in 1201, the Legislature, in the third year of John, granted a charter to the Stannaries of Devon and Cornwall; and, in 1250, in the thirty-fifth year of Henry III., the Devonshire tinners received a charter of protection. In 1304, the thirty-third of Edward I., another charter was dispensed to the Devonshire Stannaries, whereby they became separate from the Cornish ones, though still retaining in common one lord warden, and appointing their courts to be held thenceforth at Crockern Tor, on Dartmoor, instead of Hingston Hill, in Cornwall, near Callington. At Crockern Tor the president or judge's chair, part of the bench for the jurors, and three irregular steps for ascending, are still partially visible; for at this period the Stannary Courts, or Parliaments, were held in the open air. In 1306 (the thirty-fifth of Edward I.), the stannators prayed, that they might not plead anywhere except before the King, and claiming one of their body, who had been indicted for the murder of his brother, and was confined in Lydford Castle; which being granted, he was afterwards tried, acquitted, and liberated—this plainly showing the influence and privileges which they possessed, as well as their great importance as a body. In 1346 (the twenty-first year of Edward III.), by records still in existence, we learn that the tin of Devon and Cornwall could not be bought by English merchants, being monopolised by one Tidman, of Limberghe; from which cause the merchants petitioned the King, that "no merchandise be sold in gross, but to the commonalty of merchants"—to which the King replied, "that is a profit belonging to the prince, and every lord may make a profit of his own." In the year 1375 (being the fiftieth of the same King), it is recorded, that the counties of Devon and Cornwall complained, by Richard Burdeaux, Duke of Cornwall, to Parliament of various oppressions by the Stannary officers, praying the King's former grant be revoked, inasmuch that the same was made when neither the prince, nor any of his council, were called or privy thereto; and the King explained and amended the grant. In the same year, he confirmed the charter granted by Edward I. in 1304. In the year 1393 (the seventeenth of Richard II.), the barter, or sale, of tin was directed to be at Lostwithiel, in the county of Cornwall, and not to continue at Callice; but the merchants, with the license of the council, were empowered to carry tin to what parts they pleased. This removal, in all probability, arose from Restormel Castle, near Lostwithiel, being the then residence of the Duke of Cornwall. This celebrated castle, now in ruins, was visited last year by her Majesty and her Royal Consort, during their excursion in that county.

Pantdrainiog Quarry Slate Company.—We have had an opportunity of seeing some specimens of slate from this quarry—among others is a pair of large candlesticks, beautifully turned from blocks of the blue slate, which were presented by one of the present lessees to the Institution of Civil Engineers, of which he is a member; it shows to what a fine edge the slate may be worked, and proves the superior quality of the Bangor slate in this respect. The red slate from this quarry is of a very peculiar fineness, and is well adapted for chimney-pieces—polished slate being now much used for that purpose. The demand at present, however, for roofing slates is so much beyond the supply, that builders find the greatest difficulty in procuring the quantity they require, and we believe, in some cases, only do so by receiving a partial supply from several slate merchants; it must, therefore, be of great importance to increase the facilities for procuring a supply of slates. Within the last few months the price has risen materially; and, when we consider the great number of houses which are being built, even in the suburbs of the metropolis alone, as well as the vast establishments for stations, &c., which will be erected by railways within the next few years, there is every prospect of this increase of price being maintained, if not enhanced. The deposits on the shares in this company, which have been allotted to the public, are advertised to be payable on or before the 25th inst., after which, we believe, it is intended to cancel all letters not paid upon.

Trewavas.—A meeting of the adventurers has been convened by Mr. Plomer, the purser, to be held at Pearce's Hotel, Truro, on Tuesday, the 23d inst., to take into consideration the present state of the accounts, and to consult on the best means of their being brought to a final settlement.

General Mining Company for Ireland.—In noticing the arrival of two valuable parcels of silver-lead ore from this company's mines, in the Journal of the 6th inst., we inadvertently stated them as being consigned to Messrs. Mullins Brothers, of Battersea, from the *Royal* Mining Company. The *Irish Railway Gazette*, in alluding to the circumstance, says—"Our respected contemporary, the *Mining Journal*, was in error in stating the above-named parcels of ore as belonging to the "Royal Mining Company," instead of the "General Mining Company for Ireland"—no such company as the former being now extant in Ireland. The General Mining Company for Ireland, although but recently constituted, has been most beneficially engaged in affording employment to a numerous and deserving class of persons during this most calamitous period, in the mountainous district about Nenagh and Silver-mines; and they well deserve the encouragement, as they are entitled to the thanks, of their countrymen for the judicious management by which, at such an unpromising time for all monetary affairs, they have silently but effectually continued to work their enterprise. We wish them every success in their laudable exertions to employ the industrious poor, by developing the natural resources of the country."

Mines of Peru.—There are 16 silver and 42 copper mines now working by English and American parties in Peru. The number in Mexico is incalculable.

LAMBERROOE WHEAL MARIA MINING COMPANY.

A special general meeting of the adventurers was held at the offices, 4, King-street, Cheapside, on Thursday, the 19th inst., pursuant to advertisement.

CHARLES HILL, Esq., in the chair.

The SECRETARY having read the notice, the CHAIRMAN proceeded to direct the attention of the shareholders present to the immediate objects for which the meeting had been convened.—Mr. W. Snell (who was not present at the opening of the proceedings) wished to address the meeting, as the representative of the purser, whose authority he handed to the chairman, deputing him to act on his behalf; that gentleman, accordingly, proceeded to take notes of the proceedings, and enter the minutes. In adverting to this point, we are more disposed to direct attention to the subject, such having been mooted in a late Number, as affecting the Cost-book System—the several calls lately made having been rescinded, and others made in their stead, so as to render them strictly correct, in accordance therewith, which would appear not to have been observed heretofore, with a due regard to the prescribed rules observed in the county. It is, however, satisfactory to find that an understanding has taken place, and that henceforth the mine will be carried on strictly on the Cost-book Principle, and the system acted upon in working mines in Cornwall and Devon. It has been arranged that the present purser retires from office—a meeting being convened for the 30th inst., when the subject will be further discussed, and the change effected by the nomination of some other party. In thus adverting to the question, it affords us much pleasure to find, that a perfect understanding may be said now to exist between all parties; and that henceforth the only object will be, for the committee to direct their energies and attention to the active prosecution of the mine.

In reply to a question from a shareholder, the SECRETARY stated, that the amount of arrears on calls made did not exceed 147*l.*; but as it had been stated by one of the adventurers, that he should not pay the call made, and, moreover, it appearing from the opinions expressed by the chairman and one or more of the shareholders, that a question might arise as to the formality or legality of the meetings held, and the calls made at such meetings, it was determined that, in lieu of the last two calls of 10s. per share, a call should then be made of 1*l.* per share, payable on the 18th of April; and that in lieu of the late call of 1*l.* per share, payable on the 5th April, a call of equal amount should be made payable on the 19th proximo, as advertised in another column, the several adventurers who may have paid the calls previously made being credited the amount. It further appeared, from some observations which fell, that there was no difficulty in enforcing the payment of calls, as such would be readily effected by measures being resorted to by any creditor of the mine. —A general discussion having ensued, and thanks voted to the chairman, the meeting adjourned.

CALLINGTON MINES COMPANY.

The fourth annual general meeting of shareholders was held at the offices, 44, Finsbury-square, yesterday, the 19th of March.

RICHARD HODGSON, Esq., in the chair.

After the usual preliminaries, the following report of the directors was submitted:—

REPORT.

We have much satisfaction in meeting you on this occasion, to present the annual accounts made up to the end of December last. We entertain no doubt as to the continuing successful working of the mine, which has, during the last year, paid four dividends of 1*l.* per share (4000*l.*), and has established a reserve fund of 400*l.* At the last annual meeting, we announced to you that we had succeeded in getting the dues reduced from 1-15th to 1-20th on that part of the ground the property of Lord Ashburton; and that we had reason to hope we should ultimately be equally successful with the council of his Royal Highness the Prince of Wales, before whom we had laid our application. We have now the satisfaction of stating to you, that our application has been successful; and that the dues are also reduced from 1-15th to 1-20th on the estate of the duchy granted to us. Mr. Field, one of the board of directors, retires to-day from the direction; but is eligible for re-election, and offers himself accordingly.

Statement of Accounts for Three Months, ending December, 1846.

Dr. Expenditure.				*Cr.* Returns.			
October cost	£1913	13	8	Silver-lead ore, Oct. returns	£2314	19	4
November ditto	1703	4	7	Ditto Nov. ditto	2127	15	0
December ditto	1734	9	10	Ditto Dec. ditto	2200	17	2
Discount	20	17	9	Copper ore	32	4	6
Directors' attendances	62	10	0	Balance from last quarter	1017	11	2
London management	50	0	0				
Petty cash	31	12	4				
Third dividend	1100	0	0				
Balance	1076	19	0				
Total	£7693	7	2	Total	£7693	7	2

Balance, £1076 19s.—Reserve fund, £304 12s. 2d.

79, *Hatton Garden, March* 17.—As I fear some business in Devonshire will prevent my having the pleasure of meeting the shareholders on the 19th, and personally describing the operations and prospects of your mine, I take this opportunity of reporting the state of the undertaking and objects we have in view. I am happy to say, that the anticipations, which, from my knowledge by many years' observance of the nature of the mineral ground of the sett, are being realised, which the division of the profits making would be the best proof; but I also feel pleasure in stating, that the further the ground is developed, the more certain is rendered the results of the Callington Mines being a lasting investment. It was my object, in the first instance, in recommending the renewal of operations to the present company, to place the mine in a proper course of working—to effect which, it was necessary to open ground on tutwork, so as to show forth the capabilities of the silver-lead lode, before attempts were made to obtain profitable returns, inconsistent with the legitimate course of working; this, as you are aware, has been effected, by communicating the north and south mine, in the 60 fm. level—thereby creating a thorough ventilation through the workings, by which much ground is capable of being worked, which, otherwise, from the badness of the air, would have cost more than double the price to have been wrought; we have also regulated, as the setting reports will show, the proportion of tribute to the ground opened on tutwork. The surface erections have also been regulated to prospects developed in our operations underground; and, although the outlay has been greater than mentioned in my first estimate, it has been occasioned by the extra power required in the more extended workings of the mine, and is available property to the company. I consider that most of the east and west lodes, to the west of the great cross-course, are influenced by, rendered poor, and become feeders to, the north and south silver-lead lode, but keep up its strong mineral and productive character. To the east of the cross-course, however, and nearer the junction of the killas and granite of Kittshill, I think that the east and west courses are likely to be productive of copper ore; on one of these, known as the Kelly Brea lode, we are—after sinking on its course with the most promising indications—preparing to try effectually by sinking an underlaying shaft, and continuing our operations at deeper levels from the silver-lead lode, in order to fully develope its character; and I am most sanguine of the ultimate result. I can, in conclusion, only congratulate you upon the results present and prospective of the Callington Mines; and as a shareholder, as well as a manager of your mine, feel the greatest confidence in your having a lasting and profitable property; but cannot conclude without bearing testimony to the zeal and attention paid by the agents.—P. N. JOHNSON.

Callington Mines, March 15.—I am happy to inform you, that we are going forward with our operations, at Kelly Brea, in a very pleasing and comfortable manner—the dry weather proving exceedingly favourable to us. The new shaft is now down 11 fms.—the water is very easy, scarcely any obstacle to us; we have no doubt of seeing the lode, 30 fms. deep, by the end of June: our operations are being extended in this direction from the north engine-shaft, on two parallel, about 21 fms. apart—viz., the Kelly Brea, or north one, and the Copper, or south one—on the former, the 40 fm. level has been driven about 20 fms., the lode varying from 1 to 2 ft. wide, in some places with a very promising appearance; the ground is easy, the present price for driving being 55s. per fathom. In the 90 fm. level, on this lode, having met with several branches, to the east of what we consider to be the Holmbush great cross-course, we have commenced driving east on one of the largest, which still continues regular; we may expect to drive several fathoms before we see a regular formed lode, or get into settled ground; the branches occupying a space of several fathoms in extent against the cross-course, on the latter, the 70 fm. level is driven 50 fms., where the ground is changed in its appearance, being of a darker colour, driving at 65s. per fathom; we have been expecting the cross-course for some time past—the distance at the 90 fm. level, on the Kelly Brea lode, from the silver-lead lode to the same, being 31 fms.; just the same as it is in our neighbouring mine, with this exception—that we have here two cross-courses, a soft and decomposing clay slate, and a hard compact quartz one, just together—the both being 5 fms. wide, whilst in Holmbush the two are some fathoms apart; the 90 fm. level, on this lode, is driven about 14 fms.; the lode has good indications, and the ground is easy. You must be aware these operations, for the development of this part of your sett, are a very heavy drawback on the profits of the silver-lead lode, as the expense cannot be estimated at less than 170*l.* per month; we expect the present year will show the source from whence this money is to be repaid. We are now driving west, as you are aware, on Vivian's lode, in the 125 fm. level, from Johnson's engine-shaft, and calculate on seeing the silver-lead lode here about the middle of April. In the 112 fm. level, driving south, the ground has been rather hard—at the present it appears something better; the lode is intermixed with silver-lead ores, and has a more promising appearance; the north end is opening tribute ground. In the 100 fm. level, driving north, the lode has become regular, and promising; about 16 in. big, intermixed with silver-lead ores; in the south end the lode continues to produce rich work to the south of the cross-lode, lately intersected. In the 90 fathom level south, the lode has not been taken down; we have a winze in course of sinking from the 80 fm. level, to come down just behind this end, for the purpose of better ventilating the same, and opening the ground for tributers; the north end is opening ground that will work at a moderate tribute. In the 80 fm. level the lode has not been taken down since we cut the cross-course. In the 100 fathom level, driving south from the north engine-shaft, we have a rich branch of silver lead ores—the back will work at 3*s.* in the 1*l.* on the value of the lead; in the north end the ground is rather hard—the lode is 1 ft. big, being composed of sugary spar, intermixed with fluor and spots of silver-lead ores. In the 90 fm. level south the lode continues to produce worth of an average quality—the back will work at a moderate tribute; in the north end the lode looks a little more promising than for some time past, producing silver-lead ores. In the 40 fm. level north the ground continues soft—driving at 35*s.* per fm.; the lode is poor. Our tribute department, on the whole, looks well; and we calculate sampling 300 tons of silver-lead ores for the present quarter. A small quantity of tinstuff, broken from Johnson's lode, in the 112 fm. level, is now in course of returning.—J. T. PHILLIPS.

Mr. FIELD, in a neat speech, expressed himself perfectly satisfied with the proceedings at the mines. Before he had a seat in the direction he entertained different views as regards the management; but now he found everything progressing in a manner highly satisfactory.—Another shareholder followed briefly, in similar expressions of approbation; when, after a general conversation, the meeting separated, apparently pleased with the business of the day.

GREAT WHEAL MARTHA CONSOLIDATED MINING COMPANY.

The annual meeting of the adventurers was held at the offices of the company, Winchester House, Old Broad-street, on Thursday, the 18th inst.

JOHN BRIGHTMAN, Esq., in the chair.

GEORGE THOMAS, Esq., read the notice which convened the present meeting, and also the minutes of the last meeting, which were confirmed.

The CHAIRMAN presented the directors' report, with statement of accounts, as well as the agents' report, observing that the whole had undergone a strict scrutiny, as regarded the past, present, and future operations; and, the accounts having been audited, he had no doubt the same would meet the approbation of the company. The following reports were then read:—

DIRECTORS' REPORT.

The directors at this annual meeting, notwithstanding they are unable to announce any beneficial results as to ore actually raised, have much pleasure in referring to the report of Capts. Prince and Penaluna, which will shortly be read, as they evince no abatement of confidence in the undertaking, but rather an increasing expectation in the success of our operations, especially at the new mine. As respects the old mine, but little has been done for some time, owing to the want of sufficient surface water-power, to insure a constant drainage of the deep levels; and a desire, on the part of the directors, to concentrate the means at their disposal, to the eastern and most promising part of the sett. The engine, which went to work in April last, has continued to perform its duties efficiently, and the shaft has been sunk to the 40 fm. level—at which depth a cross-cut is commenced, to intersect the lode; and which, as will be seen by the mining reports above alluded to, will be effected in the month of June. The lode at this point, when met with, will, it is fully expected, prove of a most satisfactory character, and productive—but still, under any circumstances, some month would be necessary, after cutting the lode, to drive on its course, to fully establish its value and permanency. Capt. John Prince, one of the agents of the mine, has been requested by the directors to attend this meeting, and is present; he will be happy to explain his opinion, and afford every information that may be required by any shareholder. In addition to the expectations generally entertained by every practical agent, in regard to the success of the operations at the new mine, the committee have much pleasure in referring to that portion of Mr. Johnson's report, which especially alludes to the profits that may be anticipated from the sale of the mundic (hitherto supposed to be valueless), if a market can be established for it to any large extent, and which Mr. Johnson considers as very probable, looking to the valuable products contained in the peculiar mundic raised from the mines of the company. The accounts, to the 31st Dec., 1846, duly audited, showed a balance in favour of the company of 640*l.* (after debitting the expenditure for the sum of 191*l.* 14*s.* 6*d.* to Trelain estate, on which is the engine-shaft), reckoning all calls to be fully paid since the 31st Dec.: 1494 shares, then in arrear, have been paid up, leaving 579 shares out of the 4000 shares still in default. The directors have issued notices, in conformity with the rules, to these proprietors; and they expect that every shareholder, who has not already responded, will at once do so; in which case, the claims of the company will be provided for to the end of this month, and, perhaps, a small balance left in its favour. Two of the directors—viz.: Mr. John Brightman and Mr. Jonathan Duncan Day—retire by rotation at this meeting; but are duly qualified, and offer themselves, for re-election. Mr. Johnson contemplates a further outlay of about 250*l.*, to prove the new mine effectually, with a view to the consideration of the subject of providing such additional funds, for the further prosecution of the mines. The directors have resolved to call a special meeting of the shareholders, on the 5th of April next; and a subsequent special meeting on the 20th of April, to confirm, or otherwise, the proceedings that may have been agreed to at such first special meeting. It may be here observed, that a large portion of the original capital of 5*l.* per share (now all called up) has been expended in the steam-engine, machinery, and works at the new mine, not at first contemplated, but which the excellent prospects developed there at the surface, and subsequently at the 10 and 20 fm. levels, rendered imperative. At these levels, about 240 tons of ore have been raised, and more would have been produced, had not the occasionally inefficient drainage by the water-wheel prevented this being done with advantage. This will be remedied in a few months by the operations in progress, aided by the steam-engine. The directors, in their deliberation upon the important point of finance—the result of which, and details of the plan, they will submit to the special meeting referred to—have been most anxious not to depreciate the interest of the proprietors, or to place in a position of forfeiture the scares of such, as, having paid all the calls, decline for any reason to subscribe further money — at the same time, the directors have had in view the ultimate benefit of those shareholders, by forming a plan for the continuance of operations, which would not only prevent the dissolution of the company, and the almost total loss of the capital already expended, but would, it is confidently expected, provide the necessary means, without rendering compulsory on any one to contribute.

This proposition, which the directors, on behalf of themselves and friends, who are largely interested, will readily adopt, and which, they feel confident, will be also approved and responded to by the majority, if not all, the proprietors—the period being near when the works, so long in progress at the new mine, are about to prove—and, it is to be anticipated, satisfactorily—the correctness of the high expectations entertained by all competent parties. The directors anticipate that the proprietors will recognise the equity of this proposition, and assure the meeting of their unaltered confidence in the result of the undertaking, in which they believe it is greatly to the interest of every shareholder to subscribe for his proportion of the new capital.

CAPTAINS' REPORT.

We beg to hand you our annual report of this mine, which, on account of the limited operations during a greater part of the year, is necessarily brief. The quantity of ground opened since the 28th of March, 1846, is 199 fms. 3 ft.—of which, in the old mine, 23 fms. 2 ft. 2 in. Upwards of 19 fms. having been driven through a large lode in the 60 fm. level east, without meeting with any ore worthy of notice, it was thought proper to suspend driving it. The many promising indications, and favourable change in the appearance of the lode in the 90 fm. level, stimulated us to make several, though unsuccessful, attempts to drain the influx of water, in order to extend the level east in a line with the mass of ore ground taken away at the 50 and 40 fm. levels, under which we are convinced large quantities of ore are deposited. The machinery being inadequate to drain the water, we had given up all hope of seeing our object accomplished, till we discovered, that by cutting through the large promising lode, at the bottom of the shaft, from whence issued the water, the latter was found to decrease in Thomas's shaft, at the new mine, from which we infer, that, as the dip of the *laniace* of the lode in the 20 fm. level, appears to reach the 90 fm. level aforesaid, as soon as the lode is cut through at the 40 fm. level from the new engine-shaft, the water will become so reduced in the old mine, as to enable us to resume the workings. The lode in the new mine has been uniformly large and regular, and never without copper ore. The country, too, on each side of it has a very favourable appearance indeed; and it is still our decided opinion, that the indications in this mine are as favourable to produce copper, as any which ever came under our notice. The ends, both in the 10 and 20 fm. levels, having been extended a considerable distance from the shaft, to wheel the stuff to which became expensive, and being at the same time in want of pitwork, and to obviate the necessity of purchasing new, we took up the pumps, suspended operations, and hence the mine is filled with water, till we shall have cut through the lode at a deeper level. The steam-engine, which has been set at work since your last annual meeting, answers to our entire satisfaction. The new engine-shaft has been sunk, during the past year, 40 fms. 3 ft., cased and divided 52 fms., ladders fixed, ground cut, and bearers and cisterns fixed in the 20 fm. level, and also ground cut down for the plunger-lifts, which will be fixed whilst the cross-cut is being driven to cut the lode; every preparation for which is now being made, and which work will be commenced on Monday next; and should the ground continue favourable, 10 weeks from that time will suffice to cut the lode. We have had a piece of ground added to the south part of our sett, through all the lodes of South Wheal Maria and Wheal Benny Mines—on one of which, we have sunk several pits, and are now driving a level from Sherral's Bottoms west, on course of it. It is large, and strongly mineralised, containing a small quantity of tin, of good quality; but sufficient has not been done on it, to enable us to give you a decided opinion of the probable ultimate results of a further development. You will infer from the foregoing, that we still entertain a favourable opinion of your property; such is a fact. We do believe, that the old mine, in the 20 fm. level east, and below, contains large quantities of ore, and that the new mine has the highest promise also; and that, if your property is properly developed, it will crown your works with success—and we consider that a sum not exceeding 4000*l.* will be ample for both mines.—JOHN PRINCE; THOMAS PENALUNA.

P. N. JOHNSON, Esq., rose, and entered into a detailed and perspicuous statement of the proceedings at the mine, dilating, as he proceeded, upon the efficiency of the machinery, the economy pursued in the underground operations, and the ultimate success of the enterprise. The lode in the eastern part of the sett, or new mine, had been wrought on a considerable distance at the adit; the 10 and 20 fm. levels, which he (Mr. Johnson) did not hesitate to say were of so much an improved character from the western extremity, that it not only justified the operations prosecuted; but that every practical miner, who had seen it, was sanguine of the improvement likely to take place in the 40, and deeper levels. By way of comparison, he (Mr. Johnson) stated the ore produced had been of a better quality, the lode easier for driving, and the spar more abundant and nearly resembling Wheal Maria. In the course of his further observations, he gave a clear and satisfactory account of the composition of the lodes, which he had obtained after a careful analysis of the different portions which he had tested—entertaining a sanguine hope, that the period was not far distant when profitable returns would be made from the mundic, which was so abundant. From its peculiar qualities, he entertained an opinion, that arsenical pyrites would become an article of commercial interest; that samples of several tons had been supplied to different chemical manufacturers, who had expressed themselves satisfied, as far as their experiments had been carried. Mr. Johnson referred to the report of the captains, confirming the opinions expressed by them, from his personal observations.

The CHAIRMAN stated, that the directors were prepared to answer any questions that might be submitted for explanation; and, as Capt. Prince was present, he would reply to any matter connected with the operations at the mines.

A SHAREHOLDER made some inquiries as to the position of the mines, with respect to Wheal Maria, as well as the components of the lodes in the two mines, which were answered satisfactorily by Capt. Prince.

Mr. BIRDSEY had heard that the Maria lode run through Wheal Martha, and had no doubt it was the same lode, from the description given.

Mr. THOMAS desired to know of Capt. Prince, whether he had ever heard of any opinion having been expressed by those working in Maria with respect to Wheal Martha?—Capt. PRINCE stated, that he had certainly heard it remarked, by many practical agents and well-informed miners, that the Maria main lode ran through Martha sett; and, as far as his own opinion went, he felt assured of the fact, having taken frequent and particular notice of the ground—indeed, he had dialled the lode, and felt perfectly satisfied of the correctness of the assertion.

After a desultory and general conversation of some length, the CHAIRMAN stated, that a proposal for raising the necessary funds for effectually carrying on the mine would be submitted to the next general meeting, to be held on the 5th of April next, and would be open to the perusal of those present, after the business of the meeting.—The two retiring directors were then re-elected.

A SHAREHOLDER inquired, if the proposal for the new fund would be inserted in the *Mining Journal*, with the report of the present meeting?

Mr. THOMAS stated that a printed report of this day's proceedings, with directors' and agents' reports, would be immediately issued to the shareholders, to which the proposal would be appended; and thereby enable each proprietor to attend the next meeting fully prepared with his assent or dissent.

Mr. JOHNSON asserted his full conviction of the present operations terminating profitably; and so economically was every department arranged, that he was willing to double his interest, if any shares were unappropriated at the next meeting.—The thanks of the meeting were then given to the chairman, who responded for the compliment paid him.

[After the meeting, the subject of raising fresh funds by shares was entered into with a spirit of determination to effectually work the mine; and several present gave their assent at once. We, therefore, trust that the company will receive a fair and complete remuneration for their outlay, to which their enterprising spirit fully entitles them.]

WHEAL CARTHEW MINING COMPANY.

The first general meeting of adventurers was held at the office, St. Michael's-alley, Cornhill, yesterday, the 19th inst.

GEORGE MACKAY, Esq., in the chair.

It was resolved—"That to carry on the future operations of the mine, a call of 1*l.* per share be made."

The following report was read to the meeting:—

Wheal Carthew Mine, March 17.—The No. 1 lode, as marked on the map, is the first that was discovered; a pit was sunk in or near the parish road; this lode is 30 in. wide, underlay south, about 18 in. in a fathom, composed of soft flookan, spar, gossan, and portions of lead. The No. 2 lode is about 8 in. wide, composed of spar and gossan; it underlays west about 6 in. in a fathom, and a small branch each side of it. The No. 3 lode is the one we are driving the adit on, and are now in 34 fms.; since we have taken the back, in driving on this lode, we met with two slides; at this point, the lode was greatly disordered—we are now in more settled ground, and the lode making a much better appearance; in the present end, the lode is 20 in. wide, well defined, with two regular walls, underlays south 2½ ft. in a fm., composed of flookan, spar, gossan, mundic, portions of lead and copper ore, and have reason to believe it will improve in depth. On No. 4 lode, we sunk a shaft 4 fms., and find it to be 2 ft. wide, composed of flookan, and portions of gossan and spar; this appears to be a very strong lode, it underlays south 4 ft. in a fm.; on this we first intended to have driven the adit, but missed it at the foot of the hill, in consequence of the slides. The lode No 5 we have only seen in one pit; in that place it is from 2 to 3 ft. wide, composed of spar, gossan, and glist of lead; I expected we should have cut this lode in the adit before this—but I find, on the survey I have made, we shall have to drive several fathoms more to reach it; at this point, we have proposed to drive back on it, and cut the fore lode. The No. 6 and 7 lodes are small, from 12 in. to 16 in. wide, composed of gossan, flookan, and spar; their underlay is south, from 18 in. to 2 ft. in a fathom. I have reason to believe there are other lodes in the sett we have not yet seen, and most likely we shall meet with them in extending the adit, as we are at present looking more promising.—I trust we shall still continue to improve.—W. PENROSE.

KIRKCUDBRIGHTSHIRE MINING COMPANY.

A monthly general meeting of adventurers was held at the offices, Birchin-lane, on Tuesday, the 16th inst., at which a statement of accounts was produced, showing balance in favour of mine, 837*l.* 6*s.* 5*d.*—the proceeds by sales of lead being 186*l.* 16*s.* 3*d.*; and from copper, 9*l.* 12*s.* 10*d.*—The cost for Dec., 303*l.* 13*s.* 6*d.*; for Jan., 425*l.* 3*s.* 4*d.*; and for Feb., 311*l.* 9*s.* 9*d.*—calls unpaid, 441*l.* 10*s.*—The following report was read to the meeting:—

Cairnsmore Mine, March 12.—Stewart's shaft has been sunk 4 fms. under the 30 fm. level, on course of the lode, which ranges from 4 to 5 ft. wide, worth 12*l.* per fm. The 30 fm. level has been extended 12 fms. 3 ft. west of the foregoing shaft, through a lode of similar width, worth on an average about 9*l.* per fm.; in the present end, the lode is opening wider south, with a mixture of lead, worth, on the whole, 6*l.* per fm.; in the same level, we have extended east on the lode 16 fms., 10 fms. of which through a course of lead, worth 11*l.* per fm.; the lode in this end is 5 ft. wide, containing a mixture of lead, and improving; we have, therefore, 22 fms. 3 ft. in length of backs laid open in this 30 fm. level; and from the nature of the lode, in sole of the 20 fm. level, coupled with the appearance in back of the 30 fm. level, I consider we have 200 fms. of reserves, worth on an average 10*l.* per fm.=2000*l.*, and can be worked at the present rate—viz.: west stopes, 3*l.* per fm., by six men; east ditto, at 2*l.* 10*s.* per fm., by six men; east of winze, 2*l.* per fm., two men (for the rates per fathom, and number of men in other places, see the last setting report of 27th ult.) A winze has been sunk from the 20 fm. to the 30 fm. level, 10 fms. from shaft; which answers the desired end, both by ventilating the bottom of the mine, and giving great advantage to stope the backs. The 20 fm. level has been extended 10 fms., the lode ranging from 2 to 4 ft. wide, composed principally of felspar, quartz, flookan, and some mixture of clay-slate, which latter is the nature of the country rock; the lode in this end is affected by a slide we are cross-cutting north, in search of the foot wall. The adit end has been driven 17 fms. 2 ft. 6 in. through a piece of lode, as before reported on; and from the evenness of the surface (say 6 to 7 fms. deep), we cannot reasonably expect lead till we extend some 30 or 40 fms. further. Regarding our erections, we have completed the water-wheel and drawing gear; fixed a 6-inch plunger lift in the 30 fm. level, and a railroad from surface to this level in Stewart's shaft, which dips on an angle of from 32° to 24° from perpendicular; this road is also extended to both ends in the 30 fm. level, and joins the one in the shaft by a revolving platform, so the stuff has only to be shovelled once till it is discharged on the flooring at surface; and is thus managed by the water-wheel, which also pumps the water with perfect ease. It was stated, in a previous report, that a second stream of water could be added to the one now in use, by cutting an additional leat, which would give greater constancy to our top power in the summer season; to avoid inconvenience, therefore, we have thought best to accomplish this. In our dressing works it has been found necessary to extend the floors, erections, and increase the forces thereon; this has occasioned some delay in fixing the pully stands and head gear, to resume sinking Crouch's shaft; these, however, are now in a forward state, and I expect to see the same completed in a fortnight. A second cargo of lead, 37 tons 4 cwts., has been shipped from this mine on the 1st inst., for the Holywell market; and from our present prospects, we hope to get another small cargo of about 30 tons, more or less, by end of this month. Moreover, looking at the nature of the lode, in sole of the 30 fm. level, and its improving appearance in sinking Stewart's shaft, I see no reason why the returns may not proportionably increase in opening out the 40 fm. level over that of the 30, as is being realised in the 30 over that of the 20 fm. level. With good speed I hope to see Stewart's shaft down to the 40 fm. level in course of six weeks. With respect to our future proceedings, I beg to suggest that, in addition to the foregoing, it would be advisable to pierce the lode in the intermediate ground between the eastern shaft and the adit level, where, from the friable cast of the rock, and other mineral indications, I have no doubt lead will be found not very deep from surface. Another shaft, say 70 fms. west of Stewart's shaft, on the lode, would also further develope our resources; and from the character of the ends going that way, the fall of ground at surface, and dip of the ore ground already opened, I am led to think this will be found a desirable object. Coupling these and Crouch's shaft with our present scale of operation, the working cost would be extended to about 300*l.* per month; but before we proceed to make such increase, I first beg to refer this matter to your decision. On the whole, I think you will concur with me by considering that our prospects are exceedingly encouraging, particularly when you bear in mind that it is only 13 months since we began operations upon this maiden ground.—J. BUZZO.

EAST POOL.—A special meeting of adventurers was held at the mine on the 4th inst., when the following minute was read:—"At a meeting of the committee, held at Farquharson's Hotel, Truro, on the 25th day of February, 1847, Mr. Alfred Jenkin submitted a proposition on behalf of the adventurers in Wheal Agar, Tincroft, and East Wheal Crofty Mines, to pay 60*l.* per month to the East Pool adventurers, provided they keep their mine in fork to the 110 fm. level." Whereupon, the following resolutions were passed:—"That the offer, made through Mr. A. Jenkin, be accepted; and that for the consideration of 60*l.* per month, to be paid by the adventurers in Wheal Agar, Tincroft, and East Wheal Crofty Mines; the water in East Pool Mine be forked, and the mine to be kept in fork to the 110 fm. level. This agreement to be for 12 months certain, and to terminate after that time on either party giving three months' notice, provided always the estate and interest of the adventurers in the existing sett so long continue."—"That the foregoing resolution of the committee of management be confirmed, and that the committee is hereby authorised to carry out the same with as little delay as possible."—"That, in consequence of the resolution to put the engine to work, Capt. Carthew be reinstated in his former situation."—"That an application be made to South Wheal Frances adventurers for the payment of 420*l.*, the sum due from them to the East Pool adventurers for the steam-engine supplied."—[We have omitted one of the resolutions, which we consider exceedingly uncourteous to the gentleman to whom it refers; who, by a mere act of forgetfulness, omitted to honour his acceptance for 22*l.* 9*s.* for materials purchased by him for the North Basset adventurers. We learn that no notice had been given, before the obnoxious resolution came to hand, through the medium of a printed circular.]

WHEAL KAYLE.—At a general meeting of adventurers, held at the mines on the 18th ult., the accounts for 6 months ending Dec. 31, were presented, showing—Tutwork cost, 808*l.* 15*s.* 4*d.*; merchants' bills, 245*l.* 9*s.* 11*d.*; tribute pay on ores sold August 13, 5*l.* 18*s.*; October 8, 10*l.* 8*s.* 5*d.*; Dec. 10, 47*l.* 5*s.* 5*d.*=63*l.* 11*s.* 10*d.*; lord's dues payable on the above ores, 42*l.* 1*s.* 5*d.*—115*l.* 18*s.* 6*d.*—Balance in hand July 13, 72*l.* 2*s.*; copper ores sold Aug. 13, 35 tons 14 cwts. 2 qrs., 261*l.* 9*s.* 7*d.*; ditto Oct. 8, 45 tons, 325*l.* 17*s.* 2*d.*; ditto Dec. 10, 40 tons 3 cwts., 169*l.* 15*s.*—leaving balance against adventurers of 330*l.* 14*s.* 9*d.*—The accounts having been allowed and passed, it was resolved—"That, in consequence of the unfavourable indications in the bottom levels of this mine, and this meeting being perfectly satisfied with the trial given to the three lodes, which in the upper levels held out such encouraging prospects and appearances, it is hereby determined that the underground operations be suspended, and that the pitwork, &c., be drawn to the surface with as little delay as possible, which, together with the engine, be sold by public auction as early as convenient."—The following report from Capt. B. Eustice was read to the meeting:—I beg to hand you the following report on the tutwork operations in this mine from the commencement of operations. The engine-shaft is sunk from the surface 84 fms., and below the adit level 60 fms.; in the 30 fm. level, the middle lode fell in with the shaft, and in its course the shaft is sunk 30 fms. From the 30 to the 50 fm. level, we have had a good lode of ore all the length of the shaft, but it did not continue west of the shaft more than a few feet, and in driving east it cut entirely out within 5 or 6 fms. The 60 fm. level (which is the deepest part of the mine) is driven east and west of the shaft 24 fms., through a lode averaging 1 ft. wide, containing stones of ore, but which in the present ends is small and unproductive. The 50 fm. level is driven east and west of the shaft 55 fms., chiefly through a small and unproductive lode; in the upper levels, on this lode, we have extended upwards of 160 fms., and though we have met with occasional bunches of ore, yet on the whole the levels have sadly disappointed us. In the 20 fm. level we have driven a cross-cut north of the engine-shaft 58 fms. to intersect the north lode, which on the adit level shows such favourable indications, but in the 20 fm. level it is small and unpromising; in the same level we have driven a cross-cut south of the engine-shaft 52 fms., which intersected the south lode, and on which we have driven 12 fms. without any encouraging indication. The old engine-shaft we cleared from the 17 to the 30 fm. level, and sunk it 10 fms. on a small and unproductive lode. The adit level is driven on the north lode 40 fms., and communicated with Wheal Carpenter, and a winze is sunk on this lode 7 fms. below the adit, on a small and unproductive lode.

There is a winze also sunk on the south lode 5 fms. below the adit, in the bottom of which the lode is split into small strings. The ore ground stoped away on tutwork in the 40 and 50 fm. levels will measure about 40 fms. From commencement of operations up to the present time we have opened on tutwork, in sinking shafts and winzes, driving levels on the course of the lodes, and crosscuts, 630 fms. of ground, at an average price of 3*l.* 10s. per fathom; and during that period we have sold 229 tons of ore, which realised 1273*l.* Our prospects at one period of our operations were of the most gratifying kind, and we all calculated on being speedily and handsomely remunerated for our outlay; but I regret to state, that, after having given the three lodes a satisfactory trial, I am compelled to say that I see no prospects before us sufficiently bright to warrant any further expenditure.

WHEAL GILL.—A general meeting of shareholders was held at the mine on Wednesday, the 3d inst., and was afterwards adjourned to Wednesday, the 31st inst.—Since that meeting, the following report from Capt. Lean has been received:—Allow me to recommend the following work to be carried out in a vigorous manner—viz.: the 54 fm. level to be driven east with all possible speed to Alfred's shaft, and to prove whether that kindly part of the lode seen in the levels above, will not lengthen in depth, and maintain its character in appearance, if not improve at this level, by finding more copper, and less blende in the lode, also lengthen, seeing the cross-course is dipping west. I should likewise recommend your sinking Alfred's shaft to the 54 fm. level as fast as possible, and to drive west from that point toward the working in the 54 fm. level, in order to make the communication as quick as possible; also, to continue driving the 40 fm. level north and south, in order to prove the side lodes, seeing the same can be done in a very short time, and with little expense. After these several points are attained, you will then be in a much better position to judge for the future, whether you would be justified in extending the 54 fm. level further east, than any other level that has been driven through that long piece of unexplored ground, in which is found, as far as has been proved, a beautiful strata of light blue killas; to continue Alfred's shaft below this level, on the course of the lode, as far as the power of the water wheel will enable you to do, and to pump it up to the 54 fm. level, and let it run back to the engine-shaft; or, under certain circumstances, as far as you thought you were justified in going, with, or without resuming the engine-shaft; but should you, as I wish you may have occasion to, resume the sinking of that shaft, Alfred's shaft is still in its place, being sunk at or near the kindliest part of the lode, in the middle of that beautiful vale, and to the east of the cross-courses, so that the ground in any level between the two shafts can be explored and communicated by driving from each way. The situation and the strata I very much like, and, were I an adventurer therein, I should not be satisfied before the foregoing propositions were carried out and proved; which I sincerely hope may be the case, and will be found productive, and of long duration; and afford the adventurers, for their spirited outlay and perseverance, not only gratulation, but ample remuneration.

WHEAL NORRIS.—A general meeting of adventurers was held at Webb's Hotel, Liskeard, on Wednesday, the 10th inst., when the accounts were presented, showing—Balance against the company at last meeting, 65*l.* 9s. 8d.; amount of Oct. costs, 54*l.* 2s. 4d.; ditto Nov., 128*l.* 14s. 7d.=248*l.* 6s. 7d.—By arrears of former calls received since last meeting, 24*l.*; arrears reserved from the present division of balance, 7*l.*; received for engine and materials, 550*l.*; Jacob Grigg, charged and not paid, 1*l.* 12s. 4d.=582*l.* 12s. 4d.—To dividend of 1*l.* 8s. 7d. per share, on 233 shares (the remaining 23 being excluded, in consequence of arrears on calls), 332*l.* 19s. 11d.; reserved for printing circulars, postage stamps, &c., 1*l.* 5s. 10d.=334*l.* 5s. 9d.—It was then resolved, that the statement of the winding up of the affairs of the company, together with the division of the overplus, having been examined and approved, be allowed and passed: and that the purser be hereby authorised to proceed to the payment of the respective proportions forthwith.

MINING NOTABILIA—(*Extracts from our Correspondents*).

At HENDRA-BRIDGE (the new mine lately reorganised at Liskeard) the company have purchased a water-wheel, for the purpose of deepening the shaft, if the prospects seem to warrant it. The shaft is said to be 6 fms. deep, which will be soon ascertained, as they are already forking the water by means of a powerful hand-pump; it is the general opinion that lead will be found there.

The underlie of the lode in TREHANE is much less than was anticipated, which is a favourable circumstance for the company. The ore ground, too, is quite as rich as it is in the adjoining mines, in proportion to the extent opened

SOUTH HARVANNAH.—This mine ought to rank tolerably high, it being confidently stated, that she is paying cost, and that several fathoms of tin ground have been laid open; it is worthy of remark, that the tin ore in this district is remarkably pure. A few miles to the north-west of this mine is the Great Rough Torr Consols, concerning which there are favourable reports from disinterested miners, respecting the size of the lode, its extent, character of the gossan, and geological position.

In the locality of Tavistock, TAVY CONSOLS is thought well of, and the adventurers are looking forward with anxiety to see the lodes at a deeper level. Judging from the ore already returned, its richness, and the character of the district, the mine seems worthy of a spirited outlay.

DEVON AND COURTENAY has considerably improved since the weekly report was sent off on Tuesday; the improvement was considered so important, that the agent sent a messenger to advise the shareholders of Plymouth and locality with the discovery, with a stone of ore weighing 1 cwt.

The reports of DRAKE WALLS, which have lately appeared, have given great satisfaction—these speak for themselves, and require but little comment.

WEST WHEAL MARIA, WHEAL FORTESCUE, SOUTH WHEAL MARIA, and WHEAL WILLIAMS, are interesting speculations, and will, probably, attract more notice by-and-bye. It will, indeed, be an isolated case, if all prove blanks, save one.

BODMIN.—The principal attention is now being directed to the GREAT WHEAL MICHELL and NORTH CAMEL district, stretching away towards Rough Torr. The former mine continues to look exceedingly well, and the indications at North Camel are very fine indeed; but, as the last few months have been occupied in erecting machinery, &c., of course there are no recent discoveries, but practical men anticipate quite as much here as at Great Wheal Michell. It is understood that the lode which they are proving, is one of the most completely defined lodes imaginable, consisting of immense rocks of very beautiful gossan, fluor-spar, and spots of ore; the machinery, and, indeed, all the work on the mine, has been performed in a very economical manner, and the water-power is great; it is calculated that the present wheel will take them down at least 100 fms., when there is not the least doubt it will become a first-rate adventure, as the indications are seldom found so good.

PENBUGLE AND LANCARFFE CONSOLS.—There is a decided improvement here in the *lower* lode; there is a good leader of lead sometimes swelling out to a considerable size, producing good solid stones of lead, in a rich congenial spar; there is no doubt but this lode, ere long, will become productive. There is a change in the northern end of the great lode, but no ore as yet.

EAST SETON.—This mine may now be said to be afloat, and something good is anticipated; the lode recently opened on 130 fms. west of engine-shaft, is regarded as an important discovery, from which much is expected.

CARADON VALE.—This sett, which holds out good promise, is about being put on with spirit. The sett is nearly 600 fms. square, and lies about one and quarter mile south-east of South Caradon, and is immediately adjoining Wheal Gill—the lodes which have been proved being found to run parallel with those of South Caradon; an adit has been driven 76 fms., and the lode, which is 3 to 4 ft. wide, is composed of gossan, peach, prian, and mundic, impregnated with black and yellow copper ore; the strata is a light blue killas in the immediate vicinity of the granite, and considered highly favourable for mineral.

CARN CAMBORNE.—They have recently cut a large and very kindly looking lode, supposed to be the Tryphena, but much cannot be said as yet, in consequence of its being so near the surface. They have commenced driving at the 15 fm. level to intersect it, which will occupy a very short period, the distance being only a few fathoms from the north lode; still it will be giving it a trial, as it will take it from 35 to 40 fms. from the surface.

GWINEAR CONSOLS.—Capt. Tredinnick, sen., who superintends this mine, put the men, last week, to drive east and west on the large copper lode recently noticed, and it is fully expected that returns will shortly be made from the promising appearance of the lode in that level.

LAMBEROOK WHEAL MARIA.—We are given to understand, that the accident in the shaft has been so far repaired, that the sinking has been resumed. The subject, we believe, has not been treated on in the reports from the agent; and as it has had the effect of not only costing a considerable sum, but also caused a hindrance of time, the agent should be called on not only to explain the cause to which the accident is to be attributed, but his silence on the subject, and, further, to furnish an estimate of the cost.—R. W.

MARKE VALLEY.—There is a probability that the spirited adventurers of this company will speedily reap the reward of their perseverance, as the workings and pitches are all looking well, and, in fact, are yielding a profit, with the single exception of the cutting in the 65 fm. level, to get under the ore ground of the 50 fm. level; but even here there is an improvement, as more ore has been found in the spar than has hitherto been the case in this level. It is expected, that about 135 tons of ore of better quality than has yet been produced will be prepared for the next sampling.

NORTH ROSKEAR.—The circular, giving report of the meeting held on the 8th, to the absent adventurers, stated that the mine continued to look well, and that a similar dividend (10*l.* per share), would be declared the next account, proposed to be held on the 10th May; but, from the opinions formed by those conversant with the prospects and returns, a larger amount is calculated on.

WHEAL GILL.—We yesterday broke some beautiful stones of peacock ore, with the carbonate of copper, at Alfred's shaft. There appears to be but one opinion entertained by practical men, as to the results which may be looked forward to in depth. The several points of working are being prosecuted with spirit.—March 17.

WHEAL GRACE.—We learn that active operations are contemplated in working this sett by the erection of a steam-engine, and prosecuting the workings underground—the sett being immediately adjoining Wheal Concord, which holds out good promise of the lodes continuing rich in driving west towards Wheal Grace. It is, we understand, also proposed to drive out south to take the parallel lodes.

WHEAL ROSE.—Herewith you have a copy balance-sheet of the cost-book of this mine, for November and December months, 1846, showing a profit on the working for that period of 635*l.* 15s. 4d. I am authorised by the agents to say, the mine is looking quite as well as when the last accounts were made up; and I propose, after the next sale of lead, to call a meeting of the adventurers, by which time the eastern lode will be cut, and the prospects of the adventurers more fully developed. Labour cost for Nov. and Dec., 838*l.* 11s. 6d.; merchants' bills, 367*l.* 14s. 5d.=1206*l.* 5s. 11d.—By 86 tons 4 cwts. lead ore sold, 1842*l.* 1s. 3d.—Balance profit on two months, 635*l.* 15s. 4d.; balance at last account, 1378*l.* 1s. 11d.=2013*l.* 17s. 3d.—J. G. PLOMER, purser.

MINES IN SOUTH WALES.

The following extract, from a report made by Mr. P. N. Johnson, F.R.S., on the Mines in Cardiganshire, will be read with interest:—

The district consists of clay slate, varying in texture and structure in different localities; it appears to be all, more or less, metalliferous, mostly crossed with lead ore—the veins, or lodes, of which may be traced, in some instances, for several miles; there are instances, as at Cwmystwith, where there has been dislocation from the main range of hills, where the lead exists in beds. My attention was more particularly called to four mines, which are now in active operation, known as Nant-y-Cria, Bodcoll, Esgair-y-Mwyn, and Graiggoch.

Nant-y-Cria is situated about 16 miles from Aberystwith, in a south-east direction; it consists chiefly of blende, of a superior quality and richness, which is intersected by a string of quartose spar, in which lead ore (galena) is formed, in some instances, to several inches in thickness; and for which it appears to have been formerly worked, as the attle piles contain several thousand tons of blende, with but very little lead, and are being worked over for the former mineral. The mine has been worked by four levels, driven to the east, from the side of the hill, and the two lower are now prosecuting the lowest level, but one has been driven a considerable distance on the course of the lode; nearly the whole of which shows blende, varying from a few inches to nearly 3 ft. in thickness—in some places compact solid blende, from 6 in. to 18 in. in thickness—and likely, in working the mine for this mineral, to be very productive, at the same time producing a considerable quantity of lead ore. About 100 yards from the entrance to this level a winze has been sunk and holed, or communicated with the level under. There are several hundred tons of blende attached to the sides, or walls, of the levels, which may be taken away at a trifling expense; and, no doubt, the backs throughout will produce a great abundance of blende, when worked for that mineral.

Bodcoll is situated about two miles to the west of Nant-y-Cria; the lode crops out at nearly the top of the hill, and from which some lead ore, of excellent quality, has been broken. I look on the mine as being one of the highest promise, but as yet little has been done in it.

Esgair-y-Mwyn Mine is situated about 10 miles to the west of Bodcoll; there are two main runs of lead ore, and the mine has been worked to a very considerable extent by former proprietors, and said to have produced 1,200,000*l.* worth of lead to Lord Powis; an adit has been driven east, upwards of 600 yards on the course of the lode, but, until of late, nothing has been done since 1801. In order to its further effectual prosecution, a new shaft has been sunk, so as to get under the former workings near the rich and productive ground, and a leat is brought round for working a pressure-engine, so as to fully develope the mine. Near the adit tail there are immense heaps of attle, which will pay well for returning for the lead ore therein; and, for which purpose, a crushing machine and other dressing apparatus is erected, and persons now employed in picking over the attle and leavings; and I have no doubt, but much of the same description of ore will be found, as well as richer arches of ground, in clearing away the attle left by the former workers—while the mine, by the arrangements made, will be put in a regular course of working. About one mile further east a few poor persons sunk a shaft, 9 yards deep, and drove about 15 yards, from which they obtained about 160*l.* worth of ore; they were, however, prevented further prosecution, by the sett being granted to other parties, who never worked it. There are, in this place, some small attle piles, containing very rich stones of carbonate of lead, which will pay well for picking over; and, from general indications, no doubt very productive operations may be carried on. The ground in this district is of a most promising description, and would justify operations being carried on to a very great extent.

Graiggoch is about six miles to the east of Esgair-y-Mwyn; this a parallel lode to the one of Cwmystwith, from which Sir Hugh Myddleton made his fortune, and has been worked to such great advantage by Lewis Pugh, Esq., of Aberystwith—it is only separated therefrom by the river; the character of both the lodes and rock in which it exists are exactly similar to Cwmystwith. The lode has been opened on the summit of the hill, where it appears as a strong master lode, with strings of lead.

In conclusion, I have to observe, that the general indications of this extensive district of Cardiganshire, prove it to be a highly mineralised country, and would justify a very considerable outlay of capital for its effectual development; and must observe, that the operations now prosecuting, although on a comparatively small scale, are being conducted with that system and economy, which does great credit to those engaged, and likely to prove productive of successful results.—P. N. JOHNSON: *Assay Office, Hatton-garden.*

MINING IN THE MARIA DISTRICT.

SIR,—The discussion of this subject having occupied so much time and space, is, doubtless, become prolix to many of your readers, and would not be pursued further but for the observations of "An Adventurer," contained in your last. I did not, at first, take advantage of several of the palpable errors contained in his letter, supposing them to be merely typographical (which, however, you have since proved, were his own); but confined my remarks to his leading points—and one of them being, as I conceived, rather a queer statement, I certainly did, as I still do, doubt its correctness—giving him the fullest credit for its veracity; and, as he has thought proper again to refer to it, I, for the sake of perspicuity, quote his own words, and leave your readers to judge whether it be correct or not: he states that "they possess most beautifully-congenial and metalliferous killas in the shaft, and abundance of ore, even without a lode, almost realizing, what has been vaunted by the Great Maria, that they will find ore, sink where they will." It is only necessary to refer your readers to the list, on the other side, where they will see the price of the South Maria shares, which is alone a sufficient refutation of the above statement. He states that he obtained his information from *one* of the managers (how many managers are there?), and that he is not responsible for the fact. This is a very easy way of getting out of a difficulty; but I now turn his own argument against him—viz., "that assertion is not proof." Instead of lowering my crest, with reference to the contradiction of the two letters, I not only still maintain that they contradict each other, but, also, that he has contradicted himself. Here is proof—he concludes his first letter by laying down an axiom, which implies as much as if he had said—"after all, there is very little notice to be taken of the different kinds of strata and other pretended favourable indications in mining; I believe, with a Cornish captain, that where it is there it is;" but in his last letter he, in contradistinction to this opinion, enters into a geological statement, to shew the kind of strata in which the most productive lodes are likely to be found.—I am glad to hear that the weir is again repaired—as, having been nearly washed away twice, it must be consolatory to the adventurers to learn that it is, at last, likely to remain a fixture.

March 15. W. Y.

WHEAL CURTIS AND ITS NEIGHBOURING MINES.

SIR,—It must be gratifying to your correspondent of last week, "J. O.," to be interested in an adventure, of which he can form so very favourable an opinion—but I very much fear, from his summing up, "no mine in the neighbourhood has done better at the depth, though the Great Wheal Abraham is on the north, and the Great Godolphin is on the south," that he is either misinformed, or altogether unacquainted with the locality. I, therefore, beg to call his attention to your valuable Journal of the 2d of January last, where he will find a list of some mines, with the amount of *profits* derived by each, among which are—Abraham, Crenver, and Oatfield, 150,000*l.*; Binner Downs, 100,000*l*; Wheal Vor, 200,000*l.* The two first are adjoining setts with Wheal Curtis—the latter is not more than two miles distant; and had he made a little inquiry, he would have found, that during the working of Great Godolphin by Messrs. Williams, of Scorrier House, very great profits were derived therefrom, to the extent, I believe, of 100,000*l.*—but, as "J. O." refers to depth, I must do likewise; and have pleasure in giving you, from good authority, the profits actually realised from some of the neighbouring mines above the "47 fm. level"—viz., from Binner Downs, 80,000*l.*; Godolphin, 70,000*l.*; Wheal Treasury, 32,000*l.*; North Binner Downs, 10,000*l.*—giving a total of 192,000*l.* from above the level of the deepest workings of Wheal Curtis, which were effected so contrary to the neighbouring mines, that a *loss* was sustained by the late proprietary of 12,000*l.* beyond the returns. How this difference is to be accounted for, I must leave to an old mining adage—"Where it is, there it is;" but I hear that "Wheal Curtis lode is almost a cross-course." I give you the above, that the public may not be misled through others who are misinformed.

Gwinear, March 17. Z.

EXTRACTING SILVER FROM LEAD.—At Wanlockhead lead mines, a plate of silver, weighing 154 lbs., was last week extracted from a quantity of lead. The plate was about 50 lbs. heavier than one extracted on a previous occasion—the yield being about 11 ozs. of silver to one ton of lead.—*Glasgow Times.*

NORTH CAROLINA GOLD.—A vein of gold, said to be one of the richest in the United States, has been discovered on the lands of Mr. D. Merril, in the vicinity of Asheborough, N. C. The ore, by rough process, will yield $50 worth of the pure metal to the bushel.

BY HER MAJESTY'S LETTERS PATENT.

BRUNTON'S ORE-DRESSING FRAME—These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption, as

THE FOLLOWING TESTIMONIALS WILL CERTIFY:

Penzance, Feb. 6, 1847.

Two of Mr. Brunton's Frames have been at work at Wheal Gray Mine about six weeks. From the reports of the Agents, as well as from our own observation, we have reason to believe, that, by the use of these Frames, there will not only be a great saving of labour, but that the work will be done better than by the common frames.

THOMAS BOLITHO & SONS.

Ward House, Beer, near Tavistock, Nov. 10, 1846.

MY DEAR SIR,—I have much pleasure in bearing testimony to the utility of your Patent Frames, which I look upon as one of the greatest improvements, in tin dressing particularly; and have no doubt of their answering for returning lead and copper, where the ore is obliged to be reduced to a small size. The frames answer well at Tincroft Mines; and I am desirous (as the inclosed offer will show) to introduce them at our other tin mines, and the Tamar-head Silver Mines. Yours, very truly,

Mr. Wm. Brunton, jun. —— P. N. JOHNSON.

Cook's Kitchen Mine, Nov. 19, 1846.

SIR,—We have had your Patent Frames working in this mine for the last 18 months—during which time I have had them severely tested; and am happy to inform you, that I have found them, in every way, superior to the old method of dressing; and I am convinced, that it is to the interest of mines in general to use them.—I am anxious to have the last four I ordered erected as soon as possible. I am, Sir, your obedient servant,

Mr. Wm. Brunton, jun. —— JOSEPH VIVIAN.

St. Jves Consols, Dec. 7, 1846.

DEAR SIR,—Your Patent Frames have been working in this mine for 18 months, and I am happy to bear my unbiassed testimony to their utility. They are a very great improvement, in tin dressing, on the old method; and I am convinced, if your Frames were in general use in this county, the saving in labour would be considerable, and an increase of mineral obtained in the first process. I am, dear Sir, yours respectfully,

Mr. Wm. Brunton, jun. —— RICHARD KERNICK.

Birch Tor Mines, Dec. 3, 1846.

MY DEAR SIR,—Your Frames having been at work for the last four months on this mine, I have much pleasure in bearing testimony to their utility in tin dressing. We find them very superior to any thing else now in use, both as regards dispatch and cheapness; and we also find the tin cleaned by them to be of a much higher produce. I have also tried copper slimes on them, and find they are equally as beneficial in dressing these ores as they are in the dressing of tin. Yours very truly,

Mr. Wm. Brunton, jun. —— R. EDWARDS.

Camborne, Nov. 26, 1846.

DEAR SIR,—We have examined your Frames at Cook's Kitchen, and are of opinion, that they are vastly superior to any other for the purpose of cleaning ores; and will, doubtless, supersede every other now in use. They are neat, well constructed, scientific-looking machines, and can be worked at much less cost, and render the ores of higher produce, than any other we have seen. Yours truly,

NICHS. VIVIAN,

Mr. Wm. Brunton, jun. —— NICHS. VIVIAN, Jun.

Carn Brea Mines.

We, the undersigned, have great pleasure in testifying to having used Mr. Brunton's Patent Frames on these mines for the last eight months; and also to the great saving effected by them in the dressing of our tin ores.

JAMES MINERS,
NICHOLAS LENTEN,
MATTHEW ROGERS, Sen.
WILLIAM WEBB,
WILLIAM ROBERTS,
JOHN DAW,
JOHN VIVIAN.

LICENSES can be obtained, and all information given, upon application to the PATENTEE, POOL, NEAR REDRUTH.

ACCIDENTS.

Cyfarthfa Colliery.—R. Jones was killed here, while working as haulier.

Little Treviscoe Clay-Works.—J. Skidgemore died from injuries received, by having his right arm and side crushed between two cog-wheels of a steam-engine

Hady, near Chesterfield.—J. Heath was killed by a stone falling on him.

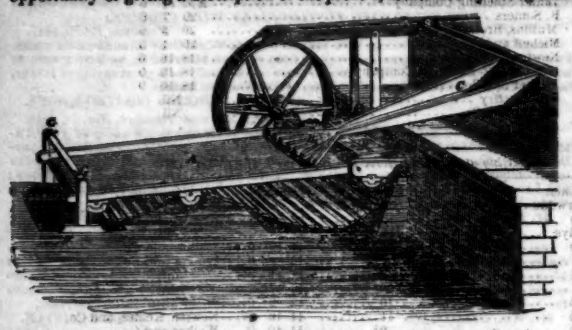
THE LATE EXPLOSION AT BARNSLEY.—On Wednesday, the adjourned inquest was held on the unfortunate men who perished in the Oaks Pit, on Friday, the 5th inst. The inquiry occupied the deputy coroner (Mr. Barker) and the jury from seven in the morning till past seven in the evening, when it was again adjourned until Thursday, the 18th inst. Mr. W. P. Roberts, attended on behalf of some of the sufferers, and put several questions to the witnesses on the state of the pit, his object apparently being to discover whether or not any blame is to be attributed to the proprietors of the colliery. On Monday last the body of W. Walton was taken out of the pit, leaving only one of the whole number not yet discovered.—J. Northorpe and J. Littlewood, who were present when the body of Walton was found, were examined, and stated that Walton was working with a candle at the time of the explosion, and that it was generally safe to work with candles in that pit. Witness had frequently cautioned the men, and Walton among the rest, against going to the old break in the pit with a candle. The witness had himself recommended another shaft to be made in addition to the two by which the pit is at present ventilated. In reply to Mr. Hence, who appeared on behalf of the proprietors of the pit, Littlewood stated that Walton had no business at the place where he was found.—H. Hewitt, a collier, was in the pit at the time of the accident. He worked with a candle, and considered that the air in the pit was good at the time. The hole he worked in appeared safe previous to the explosion. Witness had received instructions from Littlewood to be sure and use the lamp on certain occasions when the air was thick. The air was good on the day of the accident. Witness thought the two shafts of the pit were too near together.—The next witness was Mr. B. Biram (superintendent of Earl Fitzwilliam's collieries), who had been deputed by the coroner to examine the Oaks Pit. He said he had been down the pit, and examined that part where the fire commenced. Came to the conclusion that the fire had taken place at the old break, from the falling in of the roof forcing the foul air upon the candles; but, from the position in which Walton's body was found, he had become somewhat doubtful. He now thought it quite as likely that the fire had originated from his candle, if he had one that day. There was a very strong current of air when he was in the pit.—Mr. E. Wrigley, of Manchester, colliery viewer, considered the shafts amply sufficient for the ventilation of the workings in that pit, even including the stoppages. Had been in this pit in January last, and the only fault he found with it was that *it had too much air.* He went all over the works with a candle, and was perfectly satisfied with the ventilation. Believed it might be considered conclusive that Walton had fired the pit with his candle. If not, he could not have been found where he was.—The inquest was then again adjourned.—Sir H. de la Beche and Mr. W. Smythe, who have been sent down by Government, have within the last few days made a searching personal examination and inquiry into the matter The event has caused the greatest consternation in the neighbourhood, and a public meeting is called for the purpose of opening a subscription for the families of the sufferers. The jury re-assembled on Thursday, and at a late hour returned the following verdict—"Accidental death—and the jury are of opinion that efficient regulations are not enforced in this district to prevent the use of naked lights in those parts of coal-mines where inflammable gas is known to exist; and are further of opinion, that the recurrence of accidents involving so large a loss of human life, demands the immediate attention of her Majesty's Government, and would justify Parliament in framing such a code of regulations as would give greater security to persons employed in mining operations." The jury requested the coroner to forward their sentiments to the Secretary of State.

COLLIERY EXPLOSIONS—DUTIES OF GROUND BAILIFFS.—At the Worcester Assizes, on Monday last, T. Haines, the ground bailiff in the Round-green Colliery, at Oldbury, the property of Mr. Parker, was charged with having caused the death of J. Shakespeare; and the indictment alleged that it was the duty of the prisoner to keep the mine in question free from damp and gas, and fit and safe to work in: that by his negligence a considerable quantity of foul air was allowed to accumulate, which ignited and exploded, and caused the death of the deceased. The particulars of the unfortunate accident, and of the proceedings before the coroner, have already been narrated in this paper. It will be sufficient to remind our readers of the leading circumstances of the catastrophe, by which no less than 19 men of various ages lost their lives. On the day in question (the 17th Nov.), which happened on a Monday, the miners came as usual to their work, and many of them proceeded to descend the shaft; in a few moments after the first gang had reached the bottom, a loud and terrific explosion was heard, the result of which was the almost instantaneous death of nearly the whole number, amongst whom were two persons filling the rank of what is termed amongst colliers, "butty" and "doggy." It was stated by several witnesses engaged in the colliery in question, that the duty of the prisoner, as ground bailiff, was primarily to prepare a plan for the mode in which the coal is to be raised from the bed, which is then entrusted to the "butty," who sees the arrangement carried out in a practical manner. It was further a part of his duty to provide what are termed "air-headings," meaning passages for the air to circulate through, to get rid of the sulphureous vapour which is always, more or less, collecting in coal mines. These, it was stated, the prisoner did not provide in a sufficient quantity, although his attention had been called to the peculiarly sulphureous nature of the coal, and one man declared he gave notice to quit in consequence of the terror infused into his mind by its continual increase; the "butty" mentioned the matter to the prisoner, but he returned for answer that they might go on for another fortnight. On cross-examination, it was elicited that the prisoner was in the habit of personally inspecting the state of the mine at regular intervals. The morning of the accident was exceedingly thick and foggy; no wind was stirring, and the air below the surface of the earth was stated to be much affected by the state of the atmosphere above.—Mr. Serjeant ALLEN addressed the jury for the prisoner.—Mr. Justice MAULE summed up, and left it to the jury to say, whether the prosecutor had proved that it was the prisoner's duty to direct proper air-headings for the mines; if so, and he had failed in this duty, and thereby caused the death of the deceased, he ought to be found guilty.—The jury acquitted the prisoner.

CONTINENTAL SANITARY REGULATIONS.—The boasted freedom and independence of this country are not without their attendant disadvantages, and among others may be reckoned that of permitting every self-dubbed practitioner to foist his "villainous compounds" upon the public, and tamper with the lives of her Majesty's liege subjects. It would appear that "they manage these matters much better abroad," although it may not be equally known that the shoal of quack medicines with which this country is inundated are rigorously prohibited from being sold or even advertised on the continent. So strictly are these regulations enforced, that a short time since two respectable English residents of Brussels were summoned before the Tribunal de Premiere Instance, at the suit of the Procureur du Roi, the one for sending an advertisement to the Government journal, the *Emancipation*, and the other for having sold Keating's Cough Lozenges, on the ground that they were prohibited as among the *remedes secrets*. The proceedings were adjourned for a month, and meantime the Belgian Attorney-General and the official *pharmacien* were employing their legal and chemical skill upon the subject. At the end of that period, as we read in the *Brussels Herald* of the 3d March, "the two English residents were acquitted this afternoon, the Procureur du Roi being unable to prove that they comprised a *remede secret*." The *Herald* adds—"The decision of the tribunal appeared to give considerable satisfaction to a crowded court;" and we understand that since then Keating's Cough Lozenges have been the fashionable topic of conversation in the *salons*, and the popular remedy, not only in Brussels, but throughout the whole of Belgium and Holland.

BRUNTON'S ORE-DRESSING FRAME.

As much attention is now being paid to the operations of this machine, by which a great saving is effected in the cost of dressing ores, we take this opportunity of giving a description of the proce s, illustrated by a diagram.



A is a piece of prepared canvas, 30 ft. long, joined at the ends—thus forming an endless band, with slips of wood fastened transversely on the inside, and making, when stretched on frame and rollers, a surface of 12 ft. long and 4 ft. wide, the inclination of which is altered to suit the material to be operated on by the screws G G. B is an inclined plane, divided into several channels, in connection with the trough C, into which is placed the ore to be dressed, from which it is washed and distributed over the channel B. D is a shoot, over which clear water runs. E a cistern, or receptacle, where the cleaned or dressed ore is deposited; and F another, into which the dirt and waste falls. By the action of the water-wheel, the endless belt is made to move continuously upwards against the stream; and as the work is washed on the table overhead B, where the stream is increased by the clean water, which two streams combined are sufficient to wash the waste over the end of frame into cistern F; while the ore, by its superior gravity, resists the force of the stream, and is carried upward, being (while passing between the heads B and D) subject to the action of the stream of clean water. When the ore thus separated from the waste is carried up past the head D, it is free from all action of water, and adheres to the canvas until it touches the water in cistern E, when it directly falls off, and is deposited in the bottom of cistern E. Thus there is a continuous stream of material to be dressed passing over the inclined plane B—a continuous stream of waste going over the end of frame into cistern F—and a continuous stream of clean or dressed ore being deposited in cover E; and it is found that no other method yet adopted can either produce the same effect, both as regards the high produce of the cleaned ore, or the impoverished state of the waste, in which particular point the great saving is—as, let the person attending it be ever so negligent, no ore is being wasted, so long as the water-wheel is at work; while, in the old method, there is a great quantity of ore which finds its way to the tail of the frame, through the negligence of the party using it. On reference to our preceding column, sufficient testimonials will be found to satisfy the most prejudiced against innovation on the good old plans, that these frames effect a saving in labour in dressing ores of from 10 to 20 per cent.; while it is generally considered by agents and dressers, who have had them in use for months, that the saving in ore is of considerably greater importance than that saving in labour.

We also append a communication from Mr. Brunton, with additional testimonials:—

SIR,—In answer to "B. C.'s" letter, in your Journal of the 6th March I beg to send you the following statements, and should feel obliged by your inserting them.—WM. BRUNTON, Jun.: *Pool, near Redruth, March* 11.

Cook's Kitchen, March 11, 1847.—In reply to your's, of yesterday. Your patent frames, working on this mine, are saving to us in labour 20 per cent., and in tin about 5 per cent.—JOSEPH VIVIAN.

Carn Brea Mines, March 11, 1847.—We have gone minutely into a calculation of the saving effected by the use of your patent frames, and, after taking into account every expense incurred by their adoption, they will make a saving of full 10 per cent. in tin and labour.—MATTHEW ROGERS, sen., capt. dresser; JAMES MINERS, agent.

Wheal Gray Mine, March 9, 1847.—Since working your frames in the above mine, which has been about 10 weeks, we find the profit to be six-sevenths of the cost in labour, or 10s. equal to 70s.—that is to say, that two patent frames, worked by one boy at 10s. per month, do equal to five girls at 14s. per month on the former frames. The cover work, made by the patent frames, produces 14½ in 20 black tin. The cover work, made by the old frames, produces 12½ in 20 black tin, in working the same kind of stuff. As to the quantity of tin that does escape with the waste, we have not yet fully proved, as there is no seperation between the waste from them and the old frames; but hope to be prepared to make that public also very shortly.—W. TEAGUE, J. BROWN, agents; J. PERRY, dresser.

BIRAM'S OBLIQUE PADDLE-WHEELS.—Our attention having been directed to the above invention of Mr. B. Biram, of Wentworth, we are induced to give a description of them to the best of our ability, without the assistance of diagrams, which would take up so much space; and we do this with the greater pleasure, as we think the principle will be clearly understood by our readers. These paddles, instead of being fixed parallel with a line, drawn from stem to stern, form an angle of about 30° with such line—while the floats are fixed on the wheels in such oblique direction, that they revolve at right angles with such direct line—thus entering the water much nearer the centre of the boat than that at which they leave it, and the water is by this means thrown off in much larger eddies, each paddle ejecting it in its wake in a stream quite independent of the succeeding paddle. The power may be applied by means of bevel gear, attached to a shaft, in the position of the ordinary paddle-wheel shaft, by which motion could be communicated to the shafts of these paddles—there is, in fact, no practical difficulty in applying the power, which admits of a variety of arrangements. When the wheel is in motion, the water is thrown off from it obliquely, which, as it is fixed, would be to the rear of the vessel's path; each float, as we have before stated, acting in undisturbed water—the water being thrown off obliquely, and not lifted by the floats—admits of deeper submersion in the water, whereby as great an area of propelling surface is obtained as in the ordinary paddle, with a much greater resistance to the floats by the water; the entrance and emerging of the floats is as near feather edge as possible. In the ordinary paddle, the depth of immersion could not greatly exceed one-eighth of the diameter, without increasing the load upon the engines more than commensurate with any additional useful effect—so that the area of resisting surface presented to the action of the common paddle, may be said to be abont such eighth of the diameter, multiplied by the breadth, and not the area, of each submerged float, as each acts in the same plane, merely maintaining the impulse given by any one of them at the point of most useful effect. On the contrary, the oblique propeller floats, are constantly in different planes, and against undisturbed water. With regard to the proper strength of the different parts, the exact position of the retaining rings, the best material for floats, &c., practice would, no doubt, suggest many improvements.

A NEW GAS.—The scarcity of coal in France, and the consequent high price of gas, has caused many scientific men to turn their attention to the subject of the possibility of obtaining it from substances of a less costly nature than coal, or oil; and we understand that two experienced chemists of Grenoble, have taken out patents in France, and other countries, for an invention of a new gas, obtained from the distillation of excremental matter. The apparatus for obtaining this gas, is the common gas retort and furnace, in which the prepared matter is placed, and the gas passes through a small purifier to a gasometer, formed of a wooden curb, surmounted by a zinc cylinder. Previous to being placed in the retort, the matter undergoes a preparation, which separates the urinary portion; after which, it is mixed with other substances, of little value, and made into the consistence of mortar, and in this state the patentees sell it ready for the manufacture of gas, and perfectly inodorous. From comparative experiments with this substance and coal, 240 cubic feet of gas can be obtained from the same weight, as only 172 cubic feet can be obtained from coal; and, as the matter, when prepared, can be sold at about 5d. per cwt., the advantages will be greatly in its favour: the light is said to be more powerful and brilliant than coal gas, and the residue from the retorts is represented as a rich manure, particularly for calcareous lands. The liquid matter which condenses in the refrigerator, contains carbonate of ammonia, convertible into sulphate or hydrochlorate of ammonia, both articles of commerce greatly in demand.

A GREAT BRIDGE.—The new railroad bridge across the Susquehanna, at Harrisburg, is an immense structure. It is about 4000 ft. long, built upon the improved double-latticed plan. There are 28 spans, averaging 173 ft. each; and two arched viaducts, one 53 ft., and the other 84 ft. long. The entire cost of this immense structure is short of $100,000.—*American Sun.*

CONSUMPTION OF SMOKE.—A patent has been obtained by Mr. Lord, of Allerton, Chester, for an ingenious application of two furnaces or sets of fire-bars to one boiler, for steam-engine or other purposes, whereby the gases from the fuel freshly applied to one grate pass over the incandescent coke on the other, and the entire carbonaceous matters are thereby consumed. The application of these is directed in such manner, that the entire heat is applied to the whole of the boiler, although but one furnace is at a glowing heat. To effect this, the boiler is provided with a water space about the centre, extending across the upper half of the flue, and forming a bridge to direct the course of the smoke. The grates are moveable on rails; and when the fires are first about to be lighted, they are both brought towards the furnace doors, by which means all the dampers are open; when a clear red heat is obtained, one is pushed backwards to a certain point, and one set of dampers only kept open; a fresh supply of fuel, is then supplied to the other fire grate—the unconsumed carbon therefrom, passing under and through the clear fire of the first, is thoroughly decomposed, and the gases produced pass up the chimney. As soon as a bright red heat is obtained in the last fed fire, the same process is repeated with the other set of bars, and the operation has the same effect as before. There have been several modes invented, of passing the unconsumed carbon of one fire over the incandescent fuel of another, but it strikes us at the moment that this appears the most ingenious, and likely to prove the most economical of any we have yet seen of this description of furnace for the consumption of smoke.

GEORGIA TIN MINES.—Our attention has been drawn to the prospectus o the company, formed for working this sett, which is situate in the immediate locality of some of the most productive mines in the neighbourhood of St. Ives, from which, in the aggregate, we believe we are not far from the mark, in saying, that after returning the capital, full 50 per cent. has been realised—while, in some particular instances, it may be said to have been doubled or quadrupled. We have inserted, in another column, the report of Captain Edward Thomas, who may be presumed to know the district, from his practical knowledge and experience, and to whom is confided the management of the mine. It was our intention to have entered into the several points in the reports of the other agents employed to inspect the mine previous to any active operations, but such may well remain over. We are given to understand, workings on an extended scale will be immediately commenced, and that favourable results may be anticipated at an early day.

REMOVING INCRUSTATION IN STEAM-BOILERS.—M. Delfosse, of Regent-street, has just patented some improvements in preventing and removing incrustation in steam-boilers, consisting of a compound, to be used, mixed with the water for the purpose of preventing the precipitable matters contained in it from incrusting the boiler. The substances forming this compound are first dry tannic or gallic extract, obtained from oak, gall-nuts, or any other substance yielding it; secondly, muriate of soda; third, hydrate of soda; and fourth, subcarbonate of potass. These ingredients are mixed in certain proportions, varying with the nature of the water (which is to be first analysed, to ascertain the quantity of precipitable matter contained in it), and also according to the boiler, whether stationary or locomotive. For a stationary engine, the patentee recommends, for 336 hours' supply of fresh water per horse power, a compound of 12 ozs. of muriate, 2½ ozs, of hydrate of soda, 2 drachms of dry tannic or gallic extract, and half an ounce of subcarbonate of potass; but if salt water be mixed with the fresh water, or sea water be used in the boiler, then the muriate of soda is to be omitted, and 6 ozs. of hydrate of soda is to be used instead of 2½ ozs., and 5 drachms of tannic extract instead of 2. For locomotive engines running on the average 140 miles per day, the patentee increases the above proportions about one-fifth. The patentee recommends the above compound to be added at intervals—viz.: a portion every day, or every two or three days—in stationary engines it may be added to the boiler at once, and in marine engines it may be mixed with water in the boiler or in the feed tanks, but in locomotive engines it is better to mix it with the water in the tender. The patentee does not confine himself to the above proportions of the different ingredients; but what he claims is a compound of fixed alkalies, with tannic or gallic extract, for the purpose of preventing or removing incrustations on boilers.

SMART'S PROPELLER.—We have much pleasure in stating, that Mr. Smart's patent convex propeller, for steam-ships, is now in course of application to the splendid steam-ship *Princess Victoria*, trading between the ports of Liverpool and Carlisle. As we have, on previous occasions, devoted some space to remarks on the subject of this most useful invention, we will not now further advert to it, than to state, that this is the sixth application of Mr. Smart's propeller, within a very limited period, allowing this fact to speak for itself; and we believe that this information will not be afforded in vain, as our enterprising fellow-countrymen are usually among the first to adopt every modern improvement, whether in engineering or otherwise.—*Cambrian.*

IMPROVEMENTS IN THE MANUFACTURE OF IRON.

[Specification of patent granted to T. Payne, Handsworth, Birmingham, for improvements in the manufacture of rolls, for rolling iron and other metals.]—*Newton's Journal.*

This invention relates to the manufacture of rolls for rolling iron and other metals. Hitherto it has been the practice to cast the rolls with axes or necks at the ends, which axes or necks are very liable to be broken when in use. Rolls have also been cast upon bars of wrought-iron, in order thereby to strengthen the axes or necks; but, in such cases, the act of casting the roller has injured the wrought-iron bar; and rolls so made, have not, according to the patentee's belief, been better than those formed with cast-iron axes. Rolls with cast-iron axes or necks have also been cast with a small hole through the centre, so as to ensure better castings.

The above facts are stated, in order that the nature of the invention may be more clearly defined. It consists in casting the rolls hollow, and without axes or necks, and introducing wrought-iron axes or shafts into the same; the object being to produce rolls which shall be stronger than those heretofore in use. Care must be taken that the space within the rolls is cast truly, so that the shaft will fit accurately; and spaces must be left for the insertion of wedges or keys at the ends of the rolls, which wedges or keys may be securely retained in the required positions by shrinking wrought-iron collars on the shaft. The working journals are turned in the wrought-iron shaft after the roll is keyed on; and then the surface of the roll is turned. The patentee prefers that the wrought-iron shafts should be cylindrical; but he does not confine himself to that shape. The patentee claims, as his invention, the manufacture of cast-iron rolls, for rolling iron and other metals, and fixing therein wrought-iron shafts or axes, as above described.

IMPORTANT MEETING OF THE IRON TRADE.—A very influential meeting of the South Wales ironmasters, representing all the principal firms in the trade, was held at Radley's Hotel, Blackfriars, London, last week, for the purpose of adopting measures of mutual protection, in the events more particularly of strikes on the part of the workmen; and thereby preventing, as far as possible, the sudden fluctuations in prices, so injurious to all parties engaged in this important branch of manufacture. Amongst the ironmasters present were, Messrs. W. Crawshay, S. Homfray, J. Bailey, M.P., E. J. Hutchings, W. Routh, J. W. Ravenshaw, T. Brewer, A. Darby, A. Darby, T. Brown, — Harley, W. Williams, D. Johnson, J. Powell, W. Foreman, J. Levick, J. Bailey, jun., M.P., J. Macdonnell, B. Green, R. Fothergill, R. W. Kennard, W. Thompson, M.P., and W. Malins.—S. HOMFRAY, Esq., having been called to the chair, a series of resolutions was unanimously adopted, with a view to carry out the object of the meeting. In the course of the discussion, it was stated that the rates, at present paid to the workmen engaged in the manufacture of iron, were sufficient to afford the hands so employed a fair and liberal remuneration for their labour; that their wages were in fact 40 per cent. higher than those paid two years ago—more than commensurate with the advance which had taken place in the price of iron; and that any further increase would have the effect of deranging the trade, and driving customers from the home market. Under these circumstances the meeting pledged itself to resist all further demands for increased wages on the part of the men; and, with a view to meet any system of coercion that might be adopted, it was further resolved, in the event of a turn-out of the men in any of the works in the South Wales district, that each ironmaster should contribute such due proportion of the produce of his mills and furnaces, as might be necessary to meet the engagement of the firm so requiring assistance, at the following prices—viz.: 3*l.* 10s. for forge pigs, 4*l.* for No. 1 ditto, 7*l.* for bars, and 8*l.* for rails, all delivered, the payment being cash, subject to a discount of 2½ per cent., or six months, at the option of the party applying for aid. A committee was appointed, to whom all matters in dispute are to be referred. The masters present also pledged themselves not to give employment to any men who might have "turned out" under any pretence whatever, and to avoid as far as possible taking a fresh hand unless he produced a written discharge. We understand that this proceeding on the part of the masters was called forth by an anticipated strike of their workmen; and there is every probability that the example thus set by the South Wales manufacturers will be generally followed in other districts. At present, the trade in South Wales, as well as in South Staffordshire, is in a firm and healthy state; and we have reason to believe, that no alteration in prices is contemplated at the ensuing quarterly meetings, notwithstanding that the state of the money market and the depression in other branches of British manufactures might lead to the impression that the iron trade would be similarly affected. So far from this being the case, and to provide, if need be, for any exigency of the kind, we have it on the best authority, that the agents of Lord Ward are now engaged making arrangements for the erection of mills and forges on an extensive scale, for converting the produce of his lordship's mines and furnaces into manufactured iron of every description.—*Birmingham Journal.*

NEW PATENTS.

S. Lloyd, Old Park Iron-Works, Wednesbury, Stafford, engineer, for improvements in the manufacture of tires or hoops for wheels and other articles, to be made of iron or steel.

W. Newton, Chancery-lane, civil engineer, for certain improvements in engines, to be worked by gas, vapour, or steam, either separately or in combination.

R. Scotthorn, Somers Town, Middlesex, engineer, for improvements in engines for obtaining and applying motive power.

J. W. Wayte, Leeds, printer, for certain improvements in self-feeding furnaces, adapted both for land and marine purposes, for the better prevention of smoke arising from fires used in such furnaces.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., —
3 per Cent. Reduced Ans., 97⅛
3 per Cent. Consols Ans., 89⅞ 9
3 per Cent. Annuities, —
3½ per Cent. Ann., —
Long Annuities, 9
India Stock, 10½ per Cent., 247
3 per Cent. Consols for Acc., 89⅛ ⅜
Exchequer Bills, 1000*l.* 2d., 3 1 5 pm.

Belgian Bonds, 3½ per Cent., 53
Dutch, 2½ per Cent., 54⅛
Brazilian, 5 per Cents., 86
Chilian, 6 per Cents., 96
Mexican, 5 per Cents., 21¼ ⅜
Spanish, 5 per Cents., 23½ ⅝
Ditto 3 per Cents., 34½
Portuguese, 4 per Cents., 34 3½
Russian, 5 per Cents., 110½ ⅛

MINES.—A fair amount of business has been transacted in the mining share market during the week; but, from our correspondents, we learn that a far larger amount has been done in the county since our last. This is certainly a favourable precursor to the extent of business which may be anticipated for the next few months. The general improvement, which has taken place in the mines throughout the county of Cornwall, is of a pleasing and satisfactory character. The rise in the price of copper will prove encouraging to many mines, that were before scarcely paying costs; and we trust the monopolising effects of the smelters will give way by the advancement of the Standard.

There have been many inquiries for West Bassets, North Roskear, East Pool, and Wheal Metha, in which some transactions have taken place. Buyers of Treviskey and Barrier, Tresavean, North Roskear, Tamars, Condurrows, at former quotations.

We find that several newly-projected companies are before the speculating public, consisting of mines, collieries, and slate quarries; with respect to the latter, we learn that the demand for the article of slate, for home and colonial consumption, is of vast importance, and becoming of great commercial interest—the supply at present does not meet the demand by one-half. The shares in mines and collieries are apparently taken up with avidity.

The annual meeting of Wheal Martha Consols passed off, on Thursday, with satisfaction to the shareholders; and, although they have raised but little ore to meet the expenditure, the proprietary are most ready to respond to the proposition for a new issue of shares, at 3*l.* per share, to carry on the operations with spirit.—The annual meeting of the Callington Mines was held yesterday; the reports presented, and the prospect of the mines, produced a pleasing and satisfactory feeling—shares have been in demand since, at an advance.—A report, that Devon and Courtenay had improved, produced a few buyers at former prices.

Transactions in the following mines have been effected—viz.: West Wheal Jewel, Stray Park, Treleighs, Wheal Providence, East Pool, North Roskear, Dolcoath, Great Wheal Michell, South Tamars, Devon and Courtenay, West Seton, Wheal Maria (tin), Wheal Rose, Drake Walls, Wheal Metha, Wheal Jane, Wheal Ham, Kirkcudbrightshire, Gwinear Consols, and Tamars.

In foreign shares the market has been rather flat—some Australians, Bolanos, and Real Del Montes, have changed hands; but the business during the week has been very light in foreign shares.

In North British Australians an extensive business has been done at Aberdeen, and prices have advanced, owing to the arrival of very satisfactory advices from Kawau. They are much inquired about in London; buyers at ½ prem. There is a demand for the shares of the Pantdrainiog Quarry Slate Company, which have just been allotted, at a small prem.

RAILWAYS.—There is very little to notice in the transactions of Capel-court this week, as the sales have been rather limited—old-established lines, and a few of the new, have, however, maintained their firmness. The settling-day having passed over without difficulty, and the result of the weekly meeting of the Bank directors, on Thursday, being that they do not intend raising their minimum rate of interest, has given a better tone to the market. At Liverpool, Manchester, Birmingham, Leeds, and Bristol, business, generally, has been steady, and prices fully supported. Foreign shares have been better. The inauguration of the Havre and Rouen Railway, which will form a direct line to Paris, is to take place this day, the 20th, and will be opened on Monday to public transit.

MEETINGS.—SOUTH STAFFORDSHIRE JUNCTION: half-yearly; the deeds for an amalgamation with the Trent Valley Midland have been completed, and the shares of the amalgamated company distributed. The call recently made is expected to leave a balance in hand of about 150,000*l.*—LONDON, BRIGHTON, AND SOUTH EASTERN: a large meeting of shareholders, to consider the propriety of amalgamating these companies if possible, and deferring the applications for new bills to a future session—the resolutions for petitioning the House of Commons, to that effect, were carried by a large majority.—NEWPORT, ABERGAVENNY, AND HEREFORD: half-yearly; a large number of the shareholders in the Monmouthshire Company have been admitted into this company—the registration, up to the present time, consists of 377 proprietors, holding, in the aggregate, 22,180 shares of 25*l.* each, with 2*l.* 10s. per share credited thereon, out of 29,320 of like amount, being the total number authorised to be issued under the Act; the total receipts, up to the 11th inst., was 54,098*l.* 10s.; balance in hand, 26,398*l.* 19s. 7d. The directors propose, for the future, to allow 5 per cent., instead of 4, on the deposit and calls as they are paid. The two bills, which the company has in Parliament, were afterwards approved of at a special meeting.—SOUTH EASTERN: one and twentieth half-yearly; the profit and loss account showed 100,204*l.* 7s. 3d. at the disposal of the proprietors; a dividend of 1*l.* 1s. was declared upon the old shares, and 13s. and 7s. 6d. on the new, payable on the 12th of April. The directors are enlarging the coke-works at Folkestone, and erecting new works at Whitstable—adjacent to the line they intend to manufacture all the coke required.—EDINBURGH AND GLASGOW: adjourned half-yearly; the scrutineers announced a majority of 152 in favour of Sir Andrew Agnew's amendment for stopping the Sunday trains. The matter is again to be brought under the consideration of the shareholders, at a special general meeting, by Mr. M'Neill. A very strong protest was made against the general policy of the present directors, and laid on the table.—MONMOUTHSHIRE CANAL COMPANY—NEWPORT AND PONTYPOOL RAILWAY: special; the proprietors have only assented to take 203 half-shares of the 803, required to raise the railway capital of 119,100*l.* at the prices originally proposed. Interest, at the rate of 5 per cent., is to be allowed on all payments upon, or in advance of, calls.—MIDLAND GREAT WESTERN (Ireland): half-yearly; the receipts amounted to 312,682*l.*, disbursements; for the purchase of the canal, 157,899*l.*; the remainder was expended on the line. The canal traffic is satisfactory, and the works are actively progressing—during the last six months there has been an average number of 3570 labourers and tradesmen daily employed by the company; their calls had been punctually responded to, on the 1st only 20,000*l.* remained due; 26 miles of the railway would be completed at 8,000*l.* per mile, the cost of land being only 500*l.* per mile.—DIRECT LONDON AND PORTSMOUTH: special; the meeting was called to consider the drafts of the bills promoted by the company in Parliament, which were approved of.—BIRMINGHAM, WOLVERHAMPTON, AND STOURVALLEY: special; resolutions were passed, authorising the directors to proceed with the bills now before Parliament, which propose certain alterations in the main line, by means of a deviation from Smethwick, near Birmingham, and to construct branches to Dudley, Stourbridge, and Tipton—connecting the line with the South Staffordshire Junction, near Dudley Port; powers were also sanctioned for amalgamating them with the London and North Western.—GLASGOW, DUMFRIES, AND CARLISLE: half-yearly; the portion of the line between Dumfries and Gretna, being the cheapest to construct, has been the first put in hand—the contractors are bound to complete it by March 1, 1849, as well as the remainder. The balance-sheet showed that, at the 31st January, the deposit of 2*l.* 10s. had been received, and of the call of the 30th November last, amounting to 130,000*l.*, a great portion had been received.

BARRETT AND OTHERS *v.* THE STOCKTON AND DARLINGTON RAILWAY COMPANY.—CHARGES FOR TRANSIT OF COALS BY RAILWAY.—This case came before the House of Lords, on Tuesday, being an appeal from a decree of the Vice-Chancellor of England. The applicants are directors and shareholders of the Joint-Stock County of Durham Coal Company. For the transit of coals sent by them, by the Stockton and Darlington, and by the Clarence Railway (of which the respondents are directors and shareholders), to port Clarence for exportation, the respondents claimed payment at the rate of 2½d. per ton per mile, under provision of their Acts of Parliament. The appellants were unwilling to pay more than ½d. per ton per mile. A special verdict was found in that action; and upon the discussion on it in the Court of Common Pleas, it was decided that the sum o ½d. per ton per mile, for transit of the appellants coals, was the proper charge, under the Acts for construction of the said railway. The case, after being argued for some time, was adjourned to Thursday, when their Lordships altered the Vice-Chancellor's decree.

RAILWAY BILLS READ A SECOND TIME.—From the statement of the proceedings, on petitions for Private Bills, in the Session of 1847, delivered on Friday with the notes, it appears that, on and before the 12th inst., 304 bills were read a second time in the Commons.

MANCHESTER AND SOUTHAMPTON RAILWAY (No 2).—At the Standing Orders Committee of the House of Commons, yesterday, it was announced that this line was allowed to proceed, on condition of depositing new plans and sections of the datum line.—MIDLAND (Worcester, Hereford, Malvern, and Cheltenham lines, with branches to Sudbury)—the Standing Orders ought not to be dispensed with.

LEEDS, THURSDAY.—Our market has continued in the same unsatisfactory state, noted in our last, and prices have ranged lower. There was rather more animation evinced on Wednesday; but, to-day, the market has relapsed into the dull and heavy state that has characterised it of late. Birmingham and Oxfords are buyers at 8¼*l.* pm. The House of Lords has granted a Committee of Inquiry into the circumstances of this company, whose shares, it is alleged, have been bought up by the London and North-Western Company—the directors having gladly parted with their shares at 10*l.* and 11*l.* pm., retaining a sufficient qualification to enable them to sit at the board, where they seem determined to stay—despite of the unanimous vote of want of confidence passed on them by their proprietary. We fancy the Lords' committee will end their deliberations, by resolving—"That, in matters of buying and selling, it is not expedient for this hon. House to interfere."

HULL, THURSDAY.—Until this morning each day's market has been rather worse than the preceding one. Owing, however, to an advance in Consols, or, rather, perhaps, to the reaction which, of necessity, always follows a decline, the market is better. By the way, it is a most ridiculous fallacy to take Consols as a measure of value for shares, with which they have nothing more in common than they have with houses or land, or any other security. It costs much labour to disabuse capitalists of the prejudice against railway shares generally, and it will require almost as much to cause them no longer to be confounded with Government securities—but it will be done sooner or later. The most annoying thing just now is, the somewhat indecent haste many of the companies manifest

to make calls. It will not do to scramble for money; and boards of management are more likely to be brought to account for this than for expediting equitable arrangements for amalgamation, &c. The Blackburn, Darwen, and Bolton are issuing their 6 per cent. preference shares, which we consider a safe and good investment. We should think it is now pretty clear, that the proprietors would have refrained from indulging in a 5 per cent. preference stock.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending March 13, was 19,304; amount of money, £80 0s. 4d.

LATEST CURRENT PRICES OF METALS.

LONDON, MARCH 19, 1847.

	£ s.	£ s. d.		£ s.	£ s. d.
IRON—Bar *a*...Wales...*ton*	0 0—	9 0 0	COPPER—Ordin. sheets,*lb.*	0 0—	0 0 11
„ ...London ...	0 0—	10 0 0	„ bottoms	0 0—	0 0 12
Nail rods „	0 0—	10 10 0	YELLOW METAL SHEATHING	0 0—	0 0 9½
Hoop(Staf.)„	0 0—	12 0 0	TIN—Com. blocks *g ... cwt.*	0 0—	4 18 0
Sheet „ „	0 0—	13 0 0	„ bars	0 0—	4 19 0
Bars „ „	11 0—	11 10 0	Refined	0 0—	5 1 0
Welsh cold-blast foundry pig ..	4 10—	5 10 0	Straits *h*	0 0—	4 17 0
Scotch pig *b*, Clyde	3 10—	3 12 6	Banca	5 0—	5 1 0
Rails, average	9 5—	9 10 0	TIN-PLATES—Ch.,IC*i*, *box*	1 9—	1 11 0
Russian, CCND *c*..	0 0—	——	„ IX ...	1 15—	1 17 0
„ PSI ...	0 0—	——	Coke, IC	0 16 0	1 0 0
„ Gourieff	0 0—	——	„ IX	1 12 6	1 13 0
„ Archangel	0 0—13	10 0	LEAD—Sheet *k* .....*ton*	0 0—19	10 0
Swedish *d*, on the spot	11 10—11	15 0	Pig, refined	0 0—21	0 0
„ „ kegs	0 0—17	0 0	„ common	0 0—18	15 0
„ „ kegs *e*	0 0—15	5 0	„ Spanish, in bd.	0 0—17	10 0
COPPER—Tile *f*	0 0—97	0 0	SPELTER—(Cake) *l* on spot	0 0—20	0 0
Tough cake	0 0—98	0 0	„ „ for arrival	0 0—20	0 0
Best selected	0 0 101	0 0	ZINC—(Sheet) *m* ex port.*	27 0—28	0 0
			QUICKSILVER *n* ..... *lb.*	0 0—	0 4 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto 2½ per cent. *e* In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[From our Correspondent.]

IRON.—Welsh and Staffordshire continue without alteration. In Scotch pigs, owing to sales having been forced, a fall of 2s. 6d. per ton has taken place, and No. 1 has been sold at 70s. for cash—the market is dull, even at the reduced prices; a few sales of Swedish iron have been made at quotations; and the stocks of both iron and steel are very moderate.

COPPER is firm at the advance, with a fair demand.

TIN.—English continues scarce, and in good demand; foreign is quiet.

TIN-PLATES and LEAD without change since our last.

SPELTER is dull; a few small sales on the spot have been made, and stocks very low.

PRICES OF METALS IN AMERICA.

NEW YORK, FEBRUARY 28, 1847.

	$ cts.	$ cts.		$ cts.	$ cts.
COPPER—Sheathing ....*lb.*	0 23 —	0 0	IRON—Engl. & American ..	0 5½—	0 6
„ Old	0 18 —	0 18½	„ Hoops do. ..... *cwt.*	5 50 —	6 50
„ Braziers'	0 24 —	0 25	NAILS—Cut 4 da. 40 ....*lb.*	0 4½—	0 4½
„ Pig	0 18 —	0 0	(3d 1 c. & 2d 2 c. more)		
„ Bolts	0 24 —	0 25	„ Wrought, 6 to 20	0 10 —	0 14
LEAD*—Pig	4 31½—	4 37½	„ Horse-shoe	0 17 —	0 21
„ Bar	0 4½—	0 0	SHOT—Patent	0 5½—	0 0
„ Sheet	0 5½—	0 5½	„ Buck	0 6 —	0 0
IRON—Pig, Eng. & Scotch..	33 0 —	35 0	SPELTER—In plates	0 4½—	0 5
„ „ American, No. 1	30 0 —	32 50	STEEL—German ..... *lb.*	0 10½—	0 13
„ „ common	22 50 —	25 0	„ English Hoop L	0 13 —	0 13½
„ Bar, RPSI	100 0	102 50	„ Spring ..... *boxes*	0 5½—	0 5
„ „ Swedish	87 50 —	90 0	„ Trieste ..... *boxes*	0 0 —	0 0
„ „ American, old..	0 0 —	85 0	„ American	0 4½—	0 5
„ English refined	0 0 —	85 0	TIN—Block, South Amer. *lb.*	0 0 —	0 0
„ „ common .	70 0 —	72 50	„ Ditto, East India	0 0 —	0 0
„ Sh. Russian, 1st qual.	0 11½—	0 12	„ In plates, ½ dx. bx. ..	9 25 —	9 50

* Duty—Pig and bar, 3 ; old and scrap, 1½ ; sheet, 4 cts. per lb.

One hundred tons Scotch pig-iron sold at 83*l.*—six months; 1000 boxes tin-plates at $9 25—cash; 50 tons English bars at 8*l.*8. Several thousand pigs of lead at $4 25, and deliverable hereafter at $4 12½. Spelter is scarce, and sold at 5 cts. All sorts of iron are very scarce; 100 boxes Milan steel brought 6½, s. p.—six months.

EXPORTS OF METALS TO ALL INDIA FROM LONDON AND LIVERPOOL.

FOR THE FIRST TWO MONTHS OF 1846 AND 1847.

Metals.		1846.	1847.	*In.* or *De.* in 1847
Spelter	*Tons*	822	112	710
Copper		638	1143	505 —
Iron, British		506	1345	839 —
Ditto, foreign		398	77	— 321
Tin-plates	*Boxes*	1025	677	— 348
Lead	*Tons*	117	181	64 —
Steel		111	197	86 —
Quicksilver	*Bottles*	—	—	— —

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Silver bars to Hamburgh	7,700	ounces.
Ditto to ditto	£2,800	
Silver coin to ditto	5,000	ounces.
Ditto to Rotterdam	14,600	„
Ditto to Belgium	16,000	„
Gold bars to Rotterdam	3,760	„
Ditto to Hamburgh	900	„
Ditto to ditto	£7,500	
Gold coin to Hamburgh	300	ounces.
Ditto to Belgium	600	„

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 15—Buddle's West Hartley 16 3—Davidson's West Hartley 16 6—Hasting's Hartley 16 6—Holywell Main 17—North Percy Hartley 16 3—New Tanfield 14 9—Original Tanfield 14—Ord's Redheugh 14 9—Tanfield Moor 17—Wylam 16 6—Wall's End Brown's Gas 14 6—Denison 17—Hilda 17—Braddyll's Hetton 20 6—Bell 19 6—Haswell 21 3—Hetton 21 3—Lambton 21—Stewart's 21 6—High Thornley 17 6—Cowndon Tees 18 6—Gordon 15 6—Tees 21—Cowpen Hartley 16 6—Stone Coal 28—Sidney's Hartley 16 6.—Ships at market, 56.

WEDNESDAY.—Adair's Main 15—Buddle's West Hartley 16 6—Davidson's West Hartley 16 6—Holywell Main 17—New Tanfield 14 9—Ord's Redheugh 14 9—Pensher Main 17—Tanfield Moor 17—West Hartley 16 6—Wylam 16 3—Wall's End Barnard's 16—Hedworth 15 6—Eden Main 19 3—Bell 19 3—Haswell 21—Hetton 21—Lambton 20 9—Stewart's 21—Hudson's Hartlepool 19 6—Howard's West Hartley Netherton 16 6—Ships at market, 45.

FRIDAY.—Dipton Tanfield 14—Hasting's Hartley 16 6—Holywell Main 17—New Tanfield 14 6—Ord's Redheugh 14 9—Pensher Main 17—Tanfield Moor 17—Wylam 16 3—Wall's-End Barnards 16—Bell Robson 16 9—Hedworth 15 6—Eden Main 16 9 to 19 3—Belmont 19 3—Braddyll's Hetton 20 3—Bell 19—East Hetton 17 6—Haswell 21—Hetton 20 9—Lambton 20 6—Shotton 19 6—High Thornley 17 3—South Durham 18 9—Tees 20 6—Anthracite 28—Cowpen Hartley 16 6—Howard's West Hartley Netherton 16 6—Sidney's Hartley, 16 6.—Ships at market, 62.

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 136,176*l.*, thus accounted for:—63,614*l.* for the conveyance of passengers only, 40,121*l.* for the carriage of goods, and a remainder of 32,441*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 13,983*l.*, when the mileage was about 1,920.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	*Traffic Returns.* 1847	1846
Arbroath and Forfar	18	£142,900	3 *p.c.*	£ 218 8 4	£ 170
Chester and Birkenhead	15	658,393	2½	497 15 2	£ 545
Dublin and Drogheda	35	689,348	3½	701 12 0	631
Dublin and Kingstown	6	349,736	9	610 14 2	628
Dundee and Arbroath	16½	156,323	6	272 12 7½	259
East Lancashire	28	814,417	—	940 10 3	—
Eastern Counties	184½	6,513,026	7	8716 10 3	6920
Eastern Union	17	227,253	—	471 0 0	—
Edinburgh and Glasgow	46	2,112,136	6	3327 7 10	3169
Glasgow, Paisley, and Ayr	33	1,301,381	7	2339 2 3	1965
Glasgow, Paisley, & Greenock	23	829,427	2	952 8 5	766
Great Southern and Western	56½	1,343,718	—	1018 0 10	—
Great Western	241	8,685,605	8	15311 13 1	16955
Ipswich and Bury	26½	303,768	—	387 0 0	—
London and North Western	378½	18,042,004	10	34960 9 10	36418
London and Blackwall	4	1,081,273	1½	727 9 5	700
London, Brighton, & South Coast	113	3,399,230	5	5304 11 2	3570
London and South-Western	127	3,468,544	9	5977 5 3½	5272
Manchester & Leeds	117	3,770,750	7	7665 19 0	5792
Manchester, Sheffield, & Lincolnsh.	49½	1,633,221	5	1888 5 9	1563
Midland Company	329½	7,862,274	7	16990 12 4	15028
Newcastle and Berwick	9	1,184,079	5	640 0 1	—
Newcastle and Carlisle	63	1,184,080	5	2094 19 9	1762
Norfolk	70½	985,079	6	1830 17 3	1035
North British	72½	1,459,958	—	1378 12 4	—
Preston and Wyre	30	432,014	2½	547 14 4	377
Shrewsbury and Chester	15	354,945	—	331 5 11	—
South Devon	20	778,976	5	397 2 3	—
South-Eastern	140	5,260,816	3½	3650 13 3	3566
Taff Vale	30½	690,229	6½	1294 5 2	1199
Ulster	25	358,352	5½	721 19 2	658
York and Newcastle	183½	1,712,317	9	7191 12 1	6210
York and North Midland	162½	2,483,936	10	3699 14 6	4935
FOREIGN RAILWAYS.					
Dutch Rhenish	57	—	—	3061 0 0*	2708
Northern of France	260	—	4	9329 0 0	—
Orleans and Bordeaux	72	599,040	4	2537 0 0	—
Paris and Orleans	82	2,082,916	9½	6876 0 0	5887
Paris and Rouen	85	2,082,916	8½	5517 0 0	6053
Paris and Versailles (left bank)	—	—	—	—	—
Ditto (right bank)	—	—	—	—	—

* Last monthly return.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwesin	7 ..	11
512	Albert Consols	½ ..	3
1024	Alfred Consols	4½ ..	55
235	Andrew and Naugles	20½ ..	14-16
10000	Ayrshire Iron Company	1 ..	1½
10000	Banwen Iron Co.	2 ..	—
1000	Barristown	4½ ..	30
4000	Bedford	2½ ..	4
128	Besoro Lead Mine.....	14 ..	16
320	Birch Tor Tin Mine...	21½ ..	14½
8000	Blaenavon	50 ..	40
100	Botallack	175 ..	225
120	Brewer	5 ..	7
10000	British Iron, New, regis.	10 ..	17½
—	Ditto ditto, scrip.....	10 ..	19
128	Budnick Consols	52½ ..	40
128	Burthy	20 ..	21
100	Bwlch Cwmerfin	20 ..	—
128	Callestock	17 ..	52½
1000	Callington	19 ..	27
256	Caradon Consols.....	47 ..	5
256	Caradon Copper Mine	9½ ..	1
256	Caradon Mines	15 ..	15
256	Caradon United	24 ..	15
256	Caradon Wh. Hooper..	12 ..	5
1000	Carn Brea	15 ..	90
2048	Carmarthen Consols ..	2 ..	5
112	Charlestown	200 ..	175
166	Cleveland	9 ..	2½
1900	Combmartin	7½ ..	4½
1000	Comblawn	½ ..	2
128	Comfort	45 ..	100
5000	Con. Tretoil Mining Ass.	5 ..	¼
256	Condurrow	20 ..	24
2560	Cook's Kitchen	2½ ..	4
1000	Copper Bottom	1 ..	5
1024	Cosheen	4½ ..	10
240	Craddock Moor	15½ ..	15
128	Creeg Braws	120 ..	200
500	Cubert Mine	12 ..	20
7100	Derwent	8½ ..	5
1024	Devon & Courtenay Con.	5½ ..	4
1000	Dhurode	2 ..	5
186	Dolcoath	30 ..	65
10000	Durham County Coal ..	45 ..	9
256	East Alvenney	5 ..	10
112	East Caradon	40 ..	40
2048	East Crowndale	4½ ..	2½
512	East Combe Silver-Lead	5½ ..	16
128	East Pool	5 ..	21
100	East Relistian	15 ..	20
9000	East Tamar Consols ..	1½ ..	3
—	East Wheal Albert	1 ..	3
94	East Wheal Crofty....	280 ..	310
—	East Wheal Fortune ..	— ..	—
128	East Wheal Rose	50 ..	1200
—	East of Scotland Iron Co.	1½ ..	1½
123	East Wheal Seton	14 ..	20
256	Exmoor Wh. Eliza.....	5½ ..	10
512	Fowey Consols	40 ..	45
20000	Galvanised Iron Co. ..	10 ..	9½
10000	Gen. Mining Co. for Irel.	½ ..	½
1000	Godolphin	25 ..	35
256	Gonsanoss	21 ..	50
128	Goonvrea	4 ..	3
244½	Grambler & St. Aubyn —	— ..	35
100	Great Consols	1000 ..	400
256	Great Callestock Moors	22 ..	26
2560	Great Michell Consols	1½ ..	5½
256	Great Resugga Moor ..	2 ..	4
512	Gt. Wh. Rough Tor Cons.	2 ..	25
1500	Great South Tolgus....	2 ..	3
100	Grogwinion	5 ..	—
1000	Gunnis Lake	1½ ..	3
256	Gwinear Consols.....	5 ..	10½
1000	Hanson	14 ..	3
1000	Harrowbarrow Old Mine	6½ ..	3
1000	Harrowbarrow Consols	2 ..	¾
800	Hawkmoor	3 ..	2
6000	Helguston Down Con..	½ ..	2½
256	Herodsfoot	14 ..	13
10000	Hibernian	12½ ..	1
—	Hobb's Hill	4 ..	3
1000	Holmbush	18 ..	13½
256	Ivy Tor	1½ ..	2½
827	Kirkcudbrightshire....	4½ ..	5½
2048	Lamberooe Wh. Maria	9 ..	4½
128	Lanarth & Penstruthal	190 ..	100
2048	Lanivet Consols	4 ..	3
200	Larkholes	1 ..	3
160	Levant	80 ..	90
1000	Lewis	15 ..	8
1280	Llancynfelin	6 ..	10
256	Lostwithiel Consols...	7 ..	7
128	Ludcott	3 ..	3
4000	Marke Valley	10 ..	3½
5000	Mendip Hills	2 ..	2½
20000	Mining Co. of Ireland	7 ..	8½
256	New East Crowndale..	3½ ..	3½
128	North Fowey Consols..	25 ..	28-30
100	North Pool	45 ..	150
70	North Roskear	10½ ..	350
512	North Trebarget	4 ..	3
100	North United	41 ..	20
256	North Wh. Abraham ..	½ ..	10
262	North Wh. Leisure ..	1½ ..	3½
128	North Wh. Providence	2½ ..	7
256	North Wheal Rose....	26½ ..	13
15000	Northern Coal Co.	23 ..	2
1200	Old Delabole Slate Co.	25 ..	50
2000	Pantdraindog Slate Co.	2½ ..	2½
128	Par Consols.....	900 ..	1000
1024	Pembroke.....	1½ ..	6
256	Penhallow Moor	15 ..	4
4000	Pennant	1 ..	2½
100	Penrhiw	30 ..	65
128	Pen-y-Cefn Mine	50 ..	55
1280	Perran St. George Un.	13 ..	20
128	Perran Wh. Virgin....	9½ ..	82
512	Plymouth Wh. Yeoland	2½ ..	5½-6
2048	Prince Edward	1½ ..	1½
112	Providence Mines	35 ..	45
256	Redruth Consols.....	3 ..	10
10000	Rhymney Iron	50 ..	30
256	Rose Consols	10 ..	11¼
1000	Rosewall Hill	1 ..	5
—	Shotts Iron Company..	50 ..	70
2500	Silver Valley	4 ..	2½
256	Sourton Consols.....	3½ ..	4
128	South Caradon	10 ..	400-10
2000	South Dolcoath	2 ..	—
256	Sth. Friendsh. Wh. Ann	14 ..	14
200	South Harvannah	23 ..	26
9000	South Tamar	½ ..	¼
256	South Tolgus	2½ ..	20
800	South Towan	10 ..	1½

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
256	South Trelawney	15½ ..	10
128	South Veoland	16½ ..	20
128	South Wheal Basset ..	110 ..	110
124	South Wh. Francis...	160 ..	215
256	South Wh. Hope	— ..	5
1000	South Wh. Maria	2½ ..	2
256	South Wheal Rose....	11½ ..	1
10000	Southern & Western, Irish	2 ..	4-5
256	St. Austell Consols...	8 ..	14
94	St. Ives Consols	— ..	320
128	St. Michael Penkivel ..	5 ..	7
1000	Stray Park	43 ..	24
9600	Tamar Consols	3 ..	5½
1024	Tavy Consols	4 ..	3
6000	Tincroft	7 ..	10
256	Ting Tang	15 ..	12½
128	Tokenbury	140 ..	17½
256	Trehane	2 ..	22
5000	Treleigh Consols.....	6 ..	3
256	Trenow Consols	30 ..	40
96	Tresavean	10 ..	200
120	Trethellan	5 ..	35
120	Troviskey and Barrier	130 ..	160
256	Trewollack	20 ..	20
128	Trewellard	12 ..	26½
6000	United Hills.....	5 ..	¼
100	United Mines	300 ..	300
10240	Victoria Tin.....	1 ..	1
256	Wellington Mines ...	15 ..	30
128	West Basset.....	45 ..	22½-5
256	West Caradon.....	20 ..	160
128	West Cargoll	2 ..	12
512	West Fowey Consols ..	40 ..	35
256	West Grambler	7 ..	8
—	West Kekewich Consols	— ..	3
256	West Providence.....	9½ ..	20
200	West Seton.....	40 ..	80
—	West of Scotland Iron Co.	155 ..	169
120	West Trethellan	5 ..	25
256	West United Hills	2½ ..	6
256	West Wh. Friendship..	7½ ..	4
3645	West Wheal Jewel	1½ ..	2½
2560	West Wh. Maria.....	1½ ..	3½
256	West Wheal Shepherd.	5 ..	2
256	West Wheal Tolgus ..	21½ ..	6
256	West Wheal Treasury	14½ ..	12
240	Westerlake	3 ..	3
5200	Wicklow Copper.....	5 ..	15½
184	Wheal Adams	41 ..	25
1000	Wheal Agar.....	— ..	8
256	Wheal Albert	10 ..	8
128	Wheal Acland.....	13 ..	2
256	Wheal Allen	1½ ..	4
237	Wheal Anderton.....	16½ ..	32
128	Wheal Ann	— ..	50½
128	Wheal Arrose	3½ ..	6
1024	Wheal Ash	2½ ..	12
2560	Wheal Barbara	1½ ..	1½
256	Wheal Benny	6½ ..	5½-6-7
256	Wheal Blencowe	8 ..	10
256	Wheal Bucketts	20 ..	32
256	Wheal Byon Consols...	½ ..	½
256	Wheal Calstock	3 ..	4
136	Wheal Clifford	190 ..	190
1024	Wheal Concord	6½ ..	4
128	Wheal Courtenay	— ..	20
6000	Wheal Curtis	1½ ..	2
256	Wheal Dyke.....	12 ..	13
512	Wheal Elizabeth.....	2½ ..	3
256	Wheal Fortescue	5½ ..	10½
2048	Wheal Frederick.....	2 ..	2
384	Wheal France	25 ..	25
256	Wheal Gill	19½ ..	18
1024	Wheal Grace	2 ..	2½
128	Wheal Harriet.....	45 ..	50
2048	Wheal Holwell	1½ ..	1½
256	Wheal Jane.....	11 ..	25
256	Wheal Kekewich.....	4 ..	4
256	Wheal Louisa	6½ ..	8
112	Wheal Margaret	79 ..	450
256	Wheal Maria (Hayle)	19 ..	30
1024	Wheal Maria	1 ..	500
4000	Wheal Martha Consols.	5 ..	3
256	Wheal Mary Ann	8 ..	55
1024	Wheal Mary (Calstock)	5 ..	1
256	Wheal Mary Consols..	34 ..	25
256	Wheal Mary (Lanivet)	6½ ..	4
256	Wheal Mary Pentuan..	2 ..	6
256	Wheal Maude.....	1½ ..	1½
128	Wheal Metha	23 ..	92½
128	Wheal Pollard	12½ ..	12
210	Wheal Prospect	4 ..	13
128	Wheal Reith	1 ..	17
128	Wheal Rose.....	60 ..	57
99	Wheal Seton.....	150 ..	300
1024	Wheal Spearne	1½ ..	2
256	Wheal Sisters	27½ ..	22½
128	Wheal St. Ann	9 ..	15
260	Wheal Trelawney	7½ ..	115
256	Wheal Tremayne	35 ..	50
128	Wheal Trew.....	20 ..	21
256	Wheal Trevenna	3 ..	4
92	Wheal Tryphena.....	140 ..	150
128	Wheal Venland	12½ ..	10
127	Wheal Virgin	50 ..	60
256	Wheal Vlow (Perranz.)	½ ..	½
1024	Wheal Walter.....	4 ..	2
236	Wheal Williams.....	2 ..	18

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5060	Alten Mining Company	14½ ..	4½
15000	Asturian Mining Co. ..	9 ..	6
20000	Australian	2 ..	7½
10000	Anglo-Mexican Co....	100 ..	1
12374	Ditto Subscription....	25 ..	2½
3000	Bolanos	150 ..	6
2000	Ditto Scrip	15 ..	6
12000	Brazilian Imperial	20 ..	2½
10000	Cobre Copper Co.	40 ..	25-24½
8500	Colombian Co. regis..	55	4½
5000	Ditto Scrip	5½	
5000	Copiapo Mining Co....	14 ..	3½
10000	General Mining Ass'n.	20 ..	15½
20051	Mexican Company....	59 ..	—
5000	Mocaubas & Cocaes ..	25 ..	4½
29320	Rl. del Monte, regis. / Ditto unregistered	28½ ..	av. 8½
	Ditto Red Debentures	— ..	18
	Ditto Black ditto	— ..	16
	Ditto Loan Notes	150 ..	110
7000	Royal Santiago	10 ..	5
2000	Pachuca Mines	4 ..	4½
11000	St. John del Rey	15 ..	7½
43174	United Mexican	28½ ..	3

SOUTH AUSTRALIAN SHARE MARKET.

Shares.	Company.	Paid.	Price.
2000	Adelaide	5 ..	6
600	Barossa Range	4 ..	23
2464	Burra Burra.....	5 ..	100
—	Grand Junction	— ..	28
200	Greenock Creek	5 ..	13
—	Kapunda	— ..	—
—	Paringa	— ..	30
—	Poonsawurta	— ..	9½-10
—	Princess Royal.....	— ..	259
—	Royal South Australian	— ..	5 pm.
600	Victoria.....	2 ..	2
500	Wakefield	2 ..	2½

SOUTH AUSTRALIA AND NEW ZEALAND.

—	North British Australasian (Kaw-saw)	1 ..	1½

**** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

MODE OF TESTING THE PURITY OF SULPHATE OF AMMONIA (as practised at the Chemical Works, Bow Common, Middlesex).—Heat a shovel, or any plate of iron, to redness, and place upon it a portion of the salt of ammonia; if the salt be pure, the whole will go into vapour; if adulterated, the impurities will remain on the plate of iron.

CENTRAL FIRES IN THE EARTH.—The increased temperature found at increased depths in digging the Artesian wells, more particularly that of Grenelle, in France, has been adduced by M. Arago, and other philosophers, as proof of central fires in the earth. Commander C. Morten, of the Royal Navy, known as the propounder of the *electrical origin of hailstones*, and the vegetable origin of the basaltic columns of the Giant's Causeway, and those of Staffa, merely regards the increased temperature at increased depths as the natural consequence of the increased pressure of the atmosphere, and as much a matter of course as the increased cold or diminished temperature found to exist on ascending mountains, according as the atmospheric pressure diminishes in the ascent. The beautiful simplicity of this theory may, perhaps, induce the conviction of its alliance with Nature. In corroboration, we may justly remark, that the artificial compression of air does elicit heat.

SILVER-LEAD ORE.

TENDERS FOR 100 TONS OF ORE FROM THE CALLINGTON MINES.

Sold, at the Office, 44, Finsbury-square, March 15, 1847.

Firms.	*Price per Ton.*
Tamar Smelting Company	£20 11 6
B. Somers	20 7 0
Mullins, Brothers, and Co.	20 5 6
Michell and Son	20 1 6
Newton and Co.	18 16 6
Combmartin Smelting Company	18 10 0
Walker and Co.	18 10 0
J. T. Treffry	Nil.
Mather and Co.	Nil.

LEAD ORES

Tickeling at the White Horse Hotel, Holywell, March 11, 1847.

Miner.	*Tons.*	*Price.*	*Purchaser.*
Maesyrerwddu	33	£11 8 6	... Newton, Keates, and Co.
ditto	10	12 5 0	... Walker and Co.
Cortis Llys	12	11 18 0	... ditto
ditto	13	11 18 0	... Mather and Co.
Meadow	1	12 1 0	... Walker and Co.
Herward	5	11 11 0	... ditto
Hendre	20	11 11 0	... ditto
ditto	10	11 9 0	... ditto
ditto	11	11 10 6	... Newton, Keates, and Co.
ditto	9½	11 10 0	... Walker and Co.
Fronfownog	60	11 12 0	... ditto
Deep Level	41	11 5 0	... Newton, Keates, and Co.
Llangynog	14½	11 6 0	... Walker and Co.
Eastlogalas	63	11 6 6	... Newton, Keates, and Co.
Frongoch	47	10 7 0	... Walker and Co.
Goginan	32	14 8 0	... Mather and Co.
ditto	32	14 8 0

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

Also, to avoid trouble, POST-OFFICE ORDERS should always be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.

We have in type several interesting papers, among which an illustrated description of Mr. Harvey's Improvements in Filtering Water for Steam-Engines, &c.

J. E. (North Pool), J. T. (Leiant), J. D. (St. Austell).—We are obliged to our correspondents—as we are to all, who favour us with corrections for our share list.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all the news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL
And Atmospheric Railway Gazette.

LONDON, MARCH 20, 1847.

A pressure of matter, we are desirous of publishing in the present Journal, compels us to postpone our leading articles.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Barristown Mining Company—offices, at Twelve.
TUESDAY.....Trewavas Mining Company—Pearce's Hotel, Truro, at Twelve.
Wheal Concord Mining Company—Mr. Crofts' offices, at Three.
London and South-Western Railway - Station, Vauxhall, at One.
Clarence Railway—George and Vulture Tavern, at One.
FRIDAY.....Shrewsbury and Birmingham Railway—London Tavern, at One.
SATURDAY.....West Flanders Railway—London Tavern, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

NISTER DALE IRON COMPANY.

The annual general meeting of shareholders was held at the offices of the company, Old Jewry Chambers, on Thursday, the 11th inst.

S. P. PRATT, Esq., F.R.S., in the chair.

The principal points of the report, as read by the clerk, embraced the following particulars:—The directors congratulate the shareholders upon the acquisition of the Wesson blast establishment, now in operation, and the very extensive mining rights attached thereto, together with the Swinton iron-works, in Yorkshire—both important properties, as regards present advantages and future profitable extension—the former giving supplies of *spugel eisca*, or steel pig-iron, well known on the continent; and the latter in manufacturing the same into bars for the steelmakers of Sheffield, and its neighbourhood, and upon the one branch of manufacture at Swinton, a contract has been entered into for a year certain, securing a large profit to the company. Swedish iron has hitherto almost monopolised the steel trade, but it was confidently anticipated such would not be the case when this steel-iron was more extensively known. The directors recommend building two additional blast-furnaces at Wesson; and also think it right to add, that this mining property comprises also valuable mines of copper and lead, opened by the original proprietors, from which large returns could be obtained, in case the shareholders hereafter think it advisable to work them. A concession has been obtained from the Nassau Government, to build two blast furnaces, in addition to the one already erected. The rolling-mills at Nister had turned out bar-iron, boiler-plate, sheet-iron, nails, rods, and hoops, in the course of the past year; and considerable orders, at profitable prices, were now executing. Nasmyth's steam-hammer had answered every expectation, and the manufacture of boilers and steam-engines would be commenced in the course of the present year, and machinery for wire-making had been sent out.

Mr. SCALE briefly stated, that having visited the works several times in the course of the past year, he could speak with great confidence of the prospects of the company, believing as he did, that more than had been promised would be realised; and he would recommend his brother directors calling the proprietors together again, in July next, when six months' returns would satisfy them far more effectually than any promises he could make them. The Wesson purchase was a most fortunate one; and which, in point of magnitude, could only be compared with the well-known mineral district of Dowlais iron-works, in Glamorganshire. The concern was no longer a speculation—sufficient quantities of iron having been made, and sold, to assure all parties of a profitable result.—Some desultory conversation ensued, but which was of a general character, with reference to the prospects of the undertaking; and a vote of thanks having been passed to the chairman, the meeting separated, evidently well satisfied with the report of the directors, and the explanations afforded, as also the accounts submitted.

COMPRESSED AIR-ENGINE COMPANY.

A special general meeting of this company was held at the Thatched-house Tavern, St. James's, on Wednesday last, being called by a requisition from shareholders, who were desirous of the directors giving an account of the affairs of the company.—Mr. Ald. FAREBROTHER took the chair; when, after some preliminary observations, a report was read to the meeting.—From this report it appeared that Mr. Parsey had been appointed consulting engineer, and that he was to take to himself one moiety of the profits of the invention. The directors held that, if he devoted his time to the invention, let it succeed or not succeed, he ought to be rewarded; but reserved to themselves the right of fixing the amount of his salary for his personal services in carrying out the patent. It was first intended to form the company with a larger capital; and an arrangement was certainly entered into, in which the directors intended to have been more liberal towards Mr. Parsey than they now felt themselves justified in agreeing to, from their limited capital. The directors regretted that they did not find him prepared to confirm to the altered state of the company, or to furnish some of the necessary drawings. The deed, after lying for signature, had been sent to the Register Office in complete form. The directors had obtained from the working engineers an estimate for making and testing the receiver, which amounted to 300*l.* The engine, tender, and pumps, had been contracted for at 4000*l.*—but the directors felt it their duty to test the receiver in the first instance, and they entered into this contract with the approbation of Mr. Parsey. The directors had done everything since to urge on the works, but the engineers expected some allowance to be made for the new and difficult nature of the work—and Mr. Parsey, on the other hand, withheld the plans for compressing the air into this receiver.

The CHAIRMAN said, by preparing this statement, they hoped to save the shareholders the inconvenience of attending another meeting, for the sake of any information they might require at this preliminary meeting.

Mr. FABER asked, why the directors did not call them together before they ordered this receiver? If they had not money enough, they ought to have made it known to the shareholders.—The CHAIRMAN said they had not deviated from the plans of the engineer, Mr. Parsey.—Mr. SAMPSON alluded to, being the convener of the meeting: his object was to get information; for he had found, and it must be known to the directors, that extensive dissatisfaction existed amongst the shareholders.—The CHAIRMAN said, he did not know it.—Mr. SAMPSON: That such dissatisfaction did exist, he hoped the majority of shareholders would bear him out in stating. (Hear, hear.) It was as much as nine months since the last meeting, and little or nothing had been done; and it would be 10 weeks before this receiver would be completed—that would bring them on to 12 months. His object, and that of the requisitionists, was, to get information from the directors. (Hear, hear.) Although he had sent round but 56 notices, 50 of the parties immediately signed the requisition; and many others would have signed it had he but have known their addresses. These gentlemen held upwards of 2000 shares; and with them, at least, he could say, there had been a great deal of dissatisfaction. (Hear, hear.) He should like to hear some statement of the finances of the company. (Hear, hear.)—The CHAIRMAN said, the statement of accounts could not be submitted under the Joint-Stock Act itself, till it was audited. He should be very happy to answer any question. It had been stated, that the expenditure had been 4000*l.*, which was an exaggeration of about 33 per cent.; but they could not submit any accounts till the 9th of Aug., which was the annual meeting, when such would be given, and the directors would retire from office.—Mr. SAMPSON would like to know the real expenditure?—The CHAIRMAN said about 3000*l.* to the present time, including the law charges. They had still to pay the 300*l.* to the contractors. The directors had placed 3900*l.* out at interest.—A SHAREHOLDER: Is it transferable? (Laughter.)—The CHAIRMAN said, it was so; and was now in the hands of Messrs. Gurney, and Co. (Hear, hear.) The amount paid up was only 7853*l.*, and 2000*l.* more had to be received from parties wanting time.—Mr. SAMPSON was now much more satisfied.—The CHAIRMAN hoped that the drawings would be no longer kept back by Mr. Parsey, as they had now the development of the company. (Hear, hear.)—Mr. RICHARDSON understood Mr. Parsey was present. He hoped he would come forward to explain the reasons which induced him to keep back the drawings for the pumps.—The CHAIRMAN said, he had been summoned to attend the meeting.—Mr. RICHARDSON said he was a large shareholder, and had induced many of his friends to become shareholders, and hoped Mr. Parsey would make his statement. (Hear, hear.)

Mr. PARSEY, on being called upon, said, that as far back as last May, the directors of this company obtained from the working engineers an estimate of the cost of building a compressed air-engine, with tender and pumps, which was stated, he believed, at the meeting in June last, the estimate being 4100*l.* It was understood, then, that the pumps for filling the said engine should be built similarly to those that were built for the portable gas companies. At the meeting as recently as the 8th of February last, the directors called upon him for his compressing plans, when he stated to them, that the object of this company was to carry out his patented invention. He was expected to make a number of elaborate drawings, which would afterwards be thrown away, for the engineers would make them after the plans decided upon last May, neither did they form any part of his patent whatever. The sole object of this company, was to build an engine, and it was immaterial whether it were filled by a large pair of forge bellows, or any other means, so long as the engine was filled and tested.

Mr. RICHARDSON observed, that their only object at present was to finish this receiver, but they could not test it for want of pumps.

Mr. PARSEY explained, that the receiver was agreed to be tested by hydraulic pressure, and there was no need of pumps for that purpose.—The CHAIRMAN said, this had caused the delay. On the 16th of February last, there was a minute of an application to Mr. Parsey, to submit his plans for compressing the air into the receiver. On the 22d of Feb., Mr. Parsey attended, but did not produce the plans required, but said he would be able to do so at the next meeting, on the 5th of March. On the 5th of March last, Mr. Parsey attended the board, but refused to produce the plans. In a recent letter, Mr. Parsey expressed himself ready to perform every legitimate object, as soon as the directors acted like men of business, by paying him for the term of his services, and making proper arrangements. He (the chairman) hoped, that at the next meeting the directors would be able to announce, that they had received from Mr. Parsey drawings for preparing the pumps, and all things requisite. He could say they had kept strictly to the patent—in fact, they were kept to it by the deed of settlement.

Mr. PARSEY said the chairman had laid great stress upon what he required for his services as consulting engineer to the company. It had also been stated, that he was to receive one moiety of the profits arising from the invention. He would not go into all the particulars, but would simply tell the meeting, that he was not to receive one moiety, for Mr. Whiskin was to have one-fourth of it; and that, instead of the company having to pay him, he was to give the shareholders one moiety of the profits that may arise from the invention. This showed a plain and honest intention on his part of doing right to others, and showed that he expected their remmeration only from the invention being successful. (Hear, hear.) When they considered the time, labour, and expenses he had incurred by this invention, he thought they would agree that the sum he received was well merited. He was sorry to say, he had many reasons for complaining of the conduct of the directors. (Hear, hear.) For four weeks together he had been unwillingly absent, for he had not been summoned to attend the board, and so knew nothing whatever of their proceedings. The reservoir, or receiver, he never looked upon as forming any part of his patent, and he said so at the early part of the formation of this company; for if it were so, it would be necessary to have it patented. He held himself to blame for having consented to make any experiment—but that experiment must be perfectly independent of his patent, and was independent of the object of this company. The question was, whether one reservoir, of 4 ft. diameter, or smaller ones, would be best to contain the power required. However, their interest was the same as his own, but in acting as he had done, he was protecting both. There was nothing in the deed to compel him to do what he had refused. He was sorry to say, that he had no proper arrangements after all with the company for carrying out the objects—so that, unless there was one definite understanding of what he had to perform, there would always be arising some cause of dispute. He would, therefore, submit that there should be a definite agreement entered into. (Hear, hear, hear.)

Mr. RIDGWAY said, this appeared to be really a dispute between the directors and Mr. Parsey. He was one of the first to draw attention to Mr. Parsey's invention; and it was some satisfaction to find, that it had also been favourably noticed by others. The directors, however, he considered were in error, to appoint a person to be consulting engineer who was not himself a practical engineer. He understood that Mr. Parsey had kept a small shop. (Order, order, and hisses.)

A SHAREHOLDER thought that was no proof of a want of genius in Mr. Parsey. (Hear.)

Mr. RIDGWAY meant to signify, that he was no practical engineer. (Renewed hisses.)

Mr. WALLINGTON would like to ask Mr. Parsey a question.

The CHAIRMAN said the question must be put to him. (No, no.)

Mr. WALLINGTON said: Well, the question was, whether they were now working on Mr. Parsey's plans, or somebody else's plans? Without that question was distinctly answered, they would go away in mystery.

The CHAIRMAN replied, that they had not deviated from Mr. Parsey's plans. (Hear.)

Mr. RICHARDSON thought, under the circumstances, they had better adjourn for a short time; and, in the interim, he had no doubt Mr. Parsey would have the kindness to act with the directors to the utmost of his ability. (Hear, hear.) He was sure that large and respectable meeting was actuated with the same feelings as he was—namely, that Mr. Parsey should be respectfully treated, and that he should be remunerated to his own desire in the event of success; and, in the case of not succeeding, that he should be paid a certain amount. (Hear, hear, and applause.)

The CHAIRMAN drew attention to the fact, that they could make no contract, without having the drawings upon which the contract was to be made.

Mr. PARSEY asked, how it was that the contract was made in last June. The contract then was for pumps, &c.—so that, if he made drawings now, they would be a useless expense. He felt hurt at being pronounced not to be himself an engineer. He flattered himself, that the plans of his patent, and the approbation it had received from scientific men, would prove his being an engineer. (Hear, hear.)

Mr. RIDGWAY meant to say, he was no practical engineer. (Uproar and Hisses.)

Mr. PARSEY complained of the directors making or agreeing to plans without consulting him, which he thought was a great insult. (Hear, hear.) He might say, that he had never been regularly consulted; and if the minutes of the board were read, it would be seen that not a single step had been taken to further the objects of the company, and prove that he had not been regularly consulted.

A SHAREHOLDER asked about the engine?—Mr. PARSEY said, the drawings of his engine had been furnished as long back as last May. He had particular drawings, showing the form, thickness, mode of strengthening, lining, &c., for their reservoir; but there were 20 ways of strengthening lining, &c., but he must adopt his own method; and that his superintendence was important, to see that the best working process should be adopted, to insure success to his plans in that experiment. (Hear, hear.) He had laid before the directors the mode of building his large trial engine, and the working engineers highly approved of it, which was to be made as the drawings dictated.

Mr. RICHARDSON asked, if Mr. Parsey would act with the directors, to the best of his ability, in carrying out the scheme?—Mr. PARSEY replied, yes; if they would define wherein he was to act with them. (Applause.) But the directors must not offer his drawings to other engineers, so as to prejudice his patent, or unpatented, plans, or he must put himself to his legal remedy, to obtain what he required; and he (Mr. Parsey) explained, that he had not refused to make necessary drawings, and that those dwelt upon were only called for in February, 1847, which could not have been any cause of previous delay.—Mr. WICKENS hoped Mr. Parsey would be ready to act with the directors—so as to cause no further delay.

Mr. PARSEY said, it was only on the 22d of last month that Mr. Wickens advised him not to give in any fresh drawings.

The CHAIRMAN, after apologising to Mr. Parsey for anything that he might have said offensive, observed that he was sure the board would be prepared to make an arrangement to remunerate Mr. Parsey to his utmost wishes. He should hold up his hand for such an agreement. (Hear, hear.) Unless they were one body and united, they would only be wasting their money. He had great faith in this invention, and hoped it would produce great utility and advantage to the public.

After some further discussion, it was agreed that it should be left to the discretion of the directors, as to calling another meeting,—and in the interim, arrangements should be made for a cordial co-operation between Mr. Parsey and the directors, with a view to furthering the objects of the company.

A vote of thanks was then given to the chairman, and the business of the day terminated.

CALEDONIAN RAILWAY.

In the *Mining Journal* of the 6th inst., we reported the proceedings at a meeting of the shareholders, held at Edinburgh, on the 27th ult.; and we have pleasure in now extracting the following remarks on the company's management and prospects, from our contemporary, the *Scottish Railway Gazette*:—

"By far the most important meeting of this great company which has yet been held, took place on Saturday, the 27th ult.; and we refer to the several reports of the directors and engineers, as well as the proceedings on this occasion, as deeply interesting, not only to the shareholders of the company, but to the railway interest and the public generally.

The management of this company has from the commencement been distinguished by its unceasing energy and far-seeing sagacity in carrying out the comprehensive system of international communication, for which the undertaking was originally designed, and for which, by its main route and numerous ramifications, it is so admirably calculated. This has been the object for which the directors have laboured so earnestly, and it may now be fairly affirmed that their policy has been crowned with complete success. They have established an uninterrupted line of communication from London to the north of Scotland, which traverses nearly the whole length of the island, and concentrates all classes of population, and almost every variety of produce and manufactures, upon its route. The multifarious energies and resources of the metropolis, with its vast population, are opened up to the mineral and pastoral districts, and these are brought into easy and near connection with the great hives of industry and commercial communities of the west of England; the principal stations of the line comprising in fact the six or eight most populous cities in the empire—London, Birmingham, Manchester, Liverpool, Glasgow, Edinburgh, Dundee, Perth, &c. The Caledonian is not only in its plans, but in its actual relations to Scotland, what the London and North Western is to England, of which it may be truly considered as the northern extension. It was impossible that an undertaking of such magnitude should continue in its original extent, and it was but natural that it should throw out numerous connections and branches over the whole country. The original trunk has now expanded and developed itself into its natural proportions, which, though gigantic, being sustained by adequate resources, will prove neither cumbrous nor unwieldy, but equally elastic and self-supporting. It has now absorbed the Scottish Central, which will carry the southern traffic clear on to Perth; and by its lease of the Dundee and Perth line the same advantage is acquired as regards the great and busy population of Dundee. We presume there is very little doubt that a very similar arrangement will be formed with the Scottish Midland, and thus a double access will be secured to the Caledonian through traffic onwards to Aberdeen and the northern counties of Scotland. While the company have been engaged in forming and rivetting the links of this immense chain, they have not been unmindful of minor advantages, and, more particularly, have established valuable outlets in the Clyde and on the west coast, by leases and amalgamations, mutually beneficial with the Greenock, the Barrhead, and the Ardrossan lines. On all these points the Caledonian Company have secured and fortified their traffic by such judicious measures as must command, if not the whole, at least a very large proportion, of the general traffic of the country at the very outset of their operations. It is difficult not to admire equally the wisdom and ability, as well as the boldness and liberality, of this policy; and we doubt not that it will meet with an early and ample reward. At the same time, we are convinced that the directors, while extending and fortifying their position by every means in their power, are not actuated by any narrow or merely selfish views; but, on the contrary, will eagerly reciprocate the good offices of all their neighbours, without regard to any consideration extrinsic to their common business as railway proprietors.

We need not, in this place, enter into the various questions between the Caledonian and several other companies. The Nithsdale Company are now before Parliament, with branches to Canobie and Brampton; but both routes are also taken up by the Caledonian, who have likewise at the western end of their line proposed most useful branches through the districts of Lesmahagow, Douglas, Strathaven, and Dalserf. It is thus apparent that the company are resolved not only to maintain their position against competition, but to supply ample accommodation wherever it is required, or may be rendered profitable.

The financial condition of the company is fully shown in the general account of receipts and expenditure, which refers not only to the Caledonian, but to the Clydesdale Junction, the Pollock and Govan, and the Garnkirk. This statement shows a balance of 28,000*l.*; and, as the company has raised on loan only half of what they are entitled to borrow, they intend to use their statutory powers to the further extent of 350,000*l.* We are happy to observe, that the directors will defer any additional calls on the shareholders for some time, having due regard, of course, to the state of the money market.

There is one fact which will afford no small gratification to the shareholders—we allude to the lease of the Wishaw and Coltness, an essential part of the Glasgow branch. It appears that the traffic upon the present line, isolated and imperfect as it is, very greatly exceeds the guaranteed dividend, exclusive of the working expenses; and there is no doubt, that when it is incorporated with the terminal line, it will yield a handsome profit.

The progress of the works is satisfactory beyond all reasonable expectations, considering the prodigious extent of the operations, and the various difficulties of a portion of the country which the line traverses. The engineers, who are not accustomed to hazard predictions on light grounds, hold out the prospect of opening the portion from Carlisle to Beattock—40 miles in length—in the course of the ensuing autumn; thereby forming a direct continuation and extension of the Lancaster and Carlisle—a line which has already far surpassed the most sanguine anticipations of its promoters. It is also expected that the branches to Edinburgh and Glasgow, and the continuation of the main line to the Scottish Central by Castlecary, will be completed within 12 months. On all points of the line the most vigorous efforts are making to forward the works, on which are now employed 11,500 men, together with 950 horses, and several locomotives, all of which means will be greatly augmented as the season advances. The whole of the preliminary arrangements, for opening and working the line, are in rapid and regular progress. In short, every department of this company evinces the same indefatigable spirit, and the shareholders cannot but feel assured that such energy and capacity will, ere long, place their property in the very first rank of our great national investments."

THE BIRMINGHAM AND OXFORD RAILWAY.

The House of Lords, on Tuesday evening, decided, after considerable discussion, upon the appointment of a committee for the purpose of inquiring into the alleged improper interference of the London and North-Western Railway Company with the sale of the above line to the Great Western, and the measures which it is stated they have adopted for frustrating the avowed intention of the Legislature in granting a second line between Birmingham and the metropolis—viz.: that it should be free from the control of the London and Birmingham Company. We some time since stated that such was the intention of the Legislature, and the correctness of our statement has now been established by the declaration of Lord Lyndhurst and Lord Hatherton.

Those who have watched the progress of the contest between the London and Birmingham, and Great Western Companies, will recollect that the latter body were not the originators of the bill for the line—the possession of which by the one, and the control, at least, of it by the other, is now so fiercely contested. The Birmingham and Oxford line was projected chiefly by the Grand Junction Company, now a component part of the London and North-Western; and it was promoted for the express and declared purpose of defeating the asserted aggrandising policy of the latter. The Grand Junction Company now seek to destroy the independence which some two years since they publicly asserted was essential to the proper and efficient working of the railway system, so far as it relates to goods and passenger traffic between the metropolis and the north. The Great Western Company have, under the powers granted by the Act incorporating the Birmingham and Oxford Company, purchased that line. The deeds have been executed; but the London and Birmingham, as well as the Grand Junction—the original advocates of the necessity of the line, and of the integrity of its independence—are determined that the intention of the Legislature shall not be carried out—that the line shall not be on the broad gauge, and in connection with, and under the control of, the Great Western; but that it shall be on the narrow gauge, and either the property of the London and North-Western, or entirely subject to its influence. The purpose for which it was granted must not, they say, be carried out; and the Great Western Company, by whose influence alone the bill, for it was obtained, are, they confidently predict, to have a divided, and, so far as the public service is concerned, an almost impracticable, use of it.

The whole affair is a novelty in the history of the corporate proceedings of the railway companies of this, and of all other countries. Let us see how the London and North-Western Company, with its new colleagues and old promoters of a second and independent line between the metropolis and the north, are endeavouring to render the Birmingham and Oxford line a simple dependent upon their own peculiar policy, and part and parcel of their own system of railways. They could scarcely hope to struggle successfully against the position which the Great Western Company had secured by the purchase of the line; and they, therefore, took measures for the purpose of securing the appointment of a body of directors who should, directly or indirectly, be subject to their guidance. To enable them to effect this object, the London and North-Western Company, under the plea, the validity of which has to undergo judicial investigation, that the directors of the Birmingham and Oxford Company had thrown obstacles in the way of the registration of shares, held by those who were alleged to be adverse to the sale of the line to the Great Western Company, at a premium of 10*l.* 5*s.* per share, offered through their chairman, Mr. G. C. Glyn, the banker, a premium of 15*l.* per share for the property which had, in reality, been already sold to their opponents, the Great Western Company. Under the pecuniary expectations which the public would naturally presume were entertained by the shareholders of the Birmingham and Oxford Company, a conclusive outcry, it is charged, was raised against the assumed inadequacy of the price paid for the line by the Great Western Company, and a determination was expressed by certain gentlemen to whom we shall shortly allude, that the shareholders should not be prevented securing to themselves the 15*l.* premium per share offered by the London and North-Western Company; and under this colourable pretext of doing justice to the Birmingham and Oxford proprietors, and obtaining for them an equitable price for their property, the partisans of the London and North-Western Company commenced their work of agitation.

A requisition, the composition of which we shall presently attempt to analyse, was got up, calling upon the directors of the Birmingham and Oxford Company to consider the propriety of eliciting six new directors. The meeting, in compliance therewith, was duly held, and the London and North-Western influence, through the purchase of a very large number of shares, was successful in placing upon the Birmingham and Oxford board six gentlemen diametrically opposed to the interests of the Great Western Railway Company. At the same meeting an attempt was made so to regulate the resignation of directors by rotation, as to place the management of the company under the London and North-Western control in the shortest possible period of time. The chairman of the meeting declared the attempt to be an illegal one; and, declining to put the resolution for carrying out such a purpose, one of the warmest supporters of the London and North-Western Company put the motion himself, which was declared by his partisans to be carried by acclamation. The London and North-Western Company have, therefore, indirectly taken the first step towards the frustation of the intention of the Legislature in granting the Oxford and Birmingham line. Their object is, as we have stated, to obtain a preponderating power at the Birmingham and Oxford board; and whenever—should the time ever arrive—they shall be able to secure a majority of votes in that body, they will, as the construction of the line will be under their control, have the power of so managing matters as, in the absence of legislative interference, to secure for the London and North-Western Company a narrow gauge line between Oxford and Birmingham, or to make the line inefficiently, or not make it at all.

It was stated in the House of Lords, on Tuesday evening, that the whole of this movement is to be traced directly or indirectly to the London and North-Western Company; and that the object is not to secure to shareholders a premium of 15*l.* per share, but to cripple the energies of the broad gauge company, and defeat the intentions of the Legislature, for the special benefit of the former body. If there were any doubt about the fact, the connections, the positions, the relations of the very persons who signed the requisition for the meeting to which we have alluded, must at once dispel it. The requisition has attached to it the names of about 90 persons. The two first names are those of Mr. E. J. and Mr. C. Mozley, of Liverpool, brothers of one of the directors of the London and North-Western Company; and the first of whom is not only the avowed honorary agent of that company, but the confidential promoter of London and North-Western interests in this vexed question of broad and narrow gauge communication between Oxford and Birmingham. A third requisitionist is Mr. Locke, one of the engineers of the North-Western Company. A fourth is Mr. T. L. Gooch, the engineer, and private and confidential assistant of Mr. R. Stephenson, the engineer-in-chief of the London and North-Western Company. A fifth is Mr. Tootal, who has been confidently associated with the opponents of the broad gauge, and is the brother of a director of the London and North-Western Company. A sixth is Mr. Wheeler, the secretary of the Southampton and Manchester Railway Company, who have been amongst the most able Parliamentary opponents of the Great Western Company. A seventh and eighth are Mr. Peyton and Mr. Beale, directors of the Midlands Company. A ninth, tenth, eleventh, and twelfth are solicitors and agents for the London and North-Western Company. A thirteenth is Mr. Cobb, of Banbury, who has long been confidently connected with the London and Birmingham Company, and nine other of the requisitionists are his relations and friends resident in Banbury. A twenty-third is an engineer connected with the London and North-Western party. A twenty-fourth is a clerk lately in the service of that company, and who has since then, and we believe still is, in some way employed by them; and 18 of the requisitionists are sharebrokers—of whom we shall only say, that not much weight will be attached by the public to their opinions upon a question of this character; and lastly, we have the signatures of four ladies attached to the requisition.

Here we have, exclusive of the ladies, almost one-half of the requisitionists either officially and confidentially connected with the London and North-Western Company, or directly or indirectly under their control; and we have not the least doubt that a judicial inquiry into the composition of the requisition, would prove that nearly every name annexed to it has been obtained through the London and North-Western influence. We think that after this analysis of a requisition, respecting the importance of which so much has been said by the London and North-Western partisans, few will be bold enough to reiterate the declaration that Mr. Mozley and his friends are, in their opposition to the Great Western Company, actuated simply by a desire to secure to the shareholders of the Birmingham and Oxford Company an equitable consideration for their property. To those who can look impartially at the contest it must be glaringly evident that the grand object of Mr. Mozley, and his friends of the London and North-Western direction, is, to frustrate the intentions of the Legislature, and to prevent the extension of the broad gauge, and the enjoyment by the people of Birmingham and the north, of the superior speed and power to which it justly lays claim.—*Morning Herald.*

DUFFRYN LLYNVI AND PORTHCAWL RAILWAY.—A special general meeting of shareholders was held at the White Lion Hotel, Bristol, on Wednesday, the 17th inst.—Sir R. PRICE in the chair.—A sub-committee reported, that an amalgamation with the Llynvi Valley had been resolved upon, and that the bill, to authorise it, has been read a second time. The most important provisions are—That the sums of 40,000*l.*, and 10,000*l.*, raised by the Duffryn Llynvi and Porthcawl, are to form part of the capital of the Llynvi Valley, in addition to its own capital of 200,000*l.* The Llynvi Valley are to create new stock to the amount of 50,000*l.*, in 20*l.* shares, to be apportioned rateably among the holders of shares in the Duffryn Llynvi and Porthcawl, and no calls are to be made on these shares. Until the new railway is completed, interest is to be paid half-yearly, at a rate not exceeding 5 per cent. per annum, on these new shares in full, and on the calls paid up on Llynvi Valley shares. After the completion of the railway, the amalgamated shall not take for the Duffryn Llynvi and Porthcawl tolls, exceeding those authorised last session to be taken by the Llynvi Valley. The directors of the new company pay the committee of the old 3000*l.* for costs, and their solicitors' expenses, since the date of the agreement of July 24, 1846.

LINING FOR BLAST FURNACES.—A peculiar kind of black clay obtained in the neighbourhood of Newcastle is invaluable for this purpose, as it stands an intense heat without fusing.

A SEVERE AFFECTION OF THE CHEST AND LUNGS CURED BY HOLLOWAY'S PILLS.—Extract of a letter, dated Bandon, March 2, 1847.—"To Professor Holloway—Sir,—A young lady resides here, whose chest and lungs were in so delicate a state, that, from the least cold, her difficulty of breathing was such, that she could only get temporary relief by blistering. She had little or no appetite, and was so weak and debilitated, as to be obliged to rest, even in going up one flight of stairs; but, by rather a long use of your pills, I am happy to say, she has been restored to perfect health. Signed, WM. BROWN, 21, South Main-street."—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

PROGRESS OF FRENCH MINING INDUSTRY.

(FROM OUR PARIS CORRESPONDENT.)

As I have not the advantage of seeing the *Moniteur Industriel*, it is only by your leading articles that I learn that it amuses itself by attacking my communications to you. Hitherto, I have taken no notice of anything it has said; but as it appears that it now calls in the Ministry of Marine to aid it in proving that my statements are not always to be depended upon, I think it right to declare, that I am prepared at any time to give what I think full and complete proofs of every assertion that has ever been advanced in any of my letters; and, relative more particularly to my observations on the manner in which the Ministry of Marine acts, with respect to its contracts, I beg to say, that I repeat every one of them in the most decided terms, and pledge myself to their accuracy. As to the denial of the officials of the Marine Department, the *Moniteur Industriel* must pardon the plain English frankness which prompts me to tell it, that I do not consider it worth the paper on which it is written. It may be an imposing thing to the *Moniteur*, to receive a letter with "Ministry of Marine" printed in the corner, with an immense envelope, and a gigantic seal—the letter, envelope, and seal, being carried to its office by a large municipal guard, with a large moustache, a large sword, and a large horse; but, really, the *Moniteur* should not be simple enough to suppose, that the English correspondent of an English journal would see, in all that, a proof that any denial of his statements must needs be received with implicit credit, especially when that denial comes from the very parties he accused. I repeat, then, that the denial of my assertions by the Ministry of Marine, notwithstanding the pomp and solemnity with which it was conveyed to the *Moniteur*, is worth absolutely nothing. No favour in the according of contracts! Why, the very manner in which they are announced, proves that they are made hole-and-corner affairs—that is, matters of favour. Take the contracts for English coal, for example. Does the Minister of Marine advertise them in any English newspaper? Are they announced in the *Times*, the *Mining Journal*, the newspapers of Newcastle? No; they are only announced in a corner of the official *Moniteur*, and perhaps, also, by a few small-printed bills, stuck on the dead walls of Paris. Is it possible that English contractors can gain a knowledge of them from such sources? How on earth can they know that thousands of tons of coal are required? And as they know nothing, what competition can there be, except between some half-dozen speculative Frenchmen? Is not this, then, favour? Is it not favour injurious to the Government and the country at large? Only a few days ago, a Frenchman got a contract for the supply of I know not how many million kilogrammes of English coal to the coast of Africa. If the contract had been duly advertised in England, is it likely that no Englishman could have undertaken to supply the coal cheaper than he? Even supposing that he was acting as the agent for an English house, still there is no reason to doubt that, if the contract had been widely published, there would have been a very great number of English competitors; and their competition must necessarily have turned to the benefit of the State. One word more; the Ministry of Marine denies that the coal, and other articles, supplied by certain of its *favoured* contractors, are the most wretched rubbish. But if the denial be true, how happens that, when the *National*, and other journals of Paris, complain bitterly, time after time, of the detestable quality of most descriptions of marine stores, no refutation is given to them? How happens it that the complaints and remonstrances of the newspapers of Marseilles and Toulon, of Brest, of Rochefort, and of Cherbourg, are not heeded? One would be tempted to suppose that, in answering the *Mining Journal*, and disdaining the newspapers of Paris and the great sea-ports, the Marine Department ranks the *Mining Journal* infinitely above its French contemporaries, and attaches more importance to the opinion of the people of England than to that of the people of France; but, though such a supposition be extremely flattering to your newspaper, and to England, we shall not be vain enough to accept it; and must, therefore, assume that the reason why the complaints of the French journals, and the French people, are not answered is, because it is really impossible to deny their justice; and this amounts to saying, that the assertions of the *Mining Journal* are literally and strictly true.

With respect to the long-talked-of reduction in the iron duty, I have heard nothing new; but the conviction, that the Ministers will not propose any alteration, becomes more general. This will be a cruel disappointment, not only to railway companies, but to the public at large, and will most seriously retard the industrial progress of the country. There is still a talk of the retirement of the Minister of Commerce; and, if he could only be got rid of, I think there might be some chance of a change being effected, for it would be perfectly impossible for any man of ordinary intelligence, not to see, from the documents collected, that it is absolutely essential to the welfare of the entire nation that the present monstrous monopoly of the ironmasters shall not be allowed to exist.

The Paris and Orleans Railway Company advertises that it will give bills at 4½ per cent. for three months; 4¾ per cent. for six months; and 5 per cent. for nine months, in return for sums of 3000 fr., and upwards.

An attempt has been made by the manufacturers of Rouen to obtain an exemption from the *octroi* duty on coal employed in their establishments, on the ground that coal fell within one of the exemptions allowed by law; but the court decided against them. Had they succeeded, other manufacturers in all parts of the kingdom would have claimed the same exemption, and the consequence would have been an immense increase in the consumption of coal.

The directors of the Company of the Mines, &c., of Aubin (Aveyron), require payment of the third call of 100 fr. per share, to be paid half from 15th to 30th of April, and half from 15th to 30th of July. The interest of 4 per cent., due on 1st April, is to be deducted from the first payment.

A general meeting of the shareholders of the Paris and Lyons Railway will be held in Paris, on the 19th of April.

At St. Dizier, on the 11th, the demands were not important; but sufficient to keep the furnaces in operation. Opinions were, however, much divided with respect to the probability of the continuance of present prices. The *fers laminés* were at 385 fr. and 390 fr., and, if taken in large lots, at 380 fr.; the *fers battus à la houille* were 380 fr. and 385 fr. for Paris, and 390 fr. for the provinces; the *essieux bruts* were 390 fr. and 395 fr.; *essieux estampés*, 410 fr. and 415 fr.; *bandages piecés*, 420 fr. and 428 fr.; *fils de fer*, 6½; in *fontes blanches*, nothing was done—at least, publicly. A bargain was made for one lot of *fonte grise*, to be delivered at St. Dizier, at 203 fr., with six months' credit, or discount of 3 per cent. for cash.

The opening of the section of Boulogne Railway, comprised between Amiens and Abbeville, took place on Sunday, without any ceremony, and the next day was opened for traffic. It will take another year to finish the line to Boulogne.—*Paris, Wednesday.*

BRUSSELS, *March* 17.—The Government has presented a bill to the Chamber, authorising the Luxembourg Railway Company to take a period not exceeding 10 years, for the execution of the works, instead of five years, as it had bound itself to do.

The division of the shares of the Vieille Montagne Company into five parts has been approved by the Government, and will be submitted to the shareholders at the meeting in April next. It is said, that the directors have broken off their relations with some of the Paris houses, and have determined to reduce their prices, in the hope that increased consumption will make it more profitable to the company.

On the 24th inst., the Governor of the province of Brabant will receive contracts for the supply of 2200 tons of rails, 500 tons of chairs, and other articles for the railway; and on 23d instant, contracts will be received for large quantities of steel and iron, for the arms manufactory at Liege.

The Valentine Co. directors call a meeting of the shareholders for April 15.

Great activity exists in almost all our iron furnaces. Our ironmasters are waiting, with some anxiety, to learn whether the French Government intends to propose any modification of the import duties on iron. Should any reduction be made, Belgium would profit more largely than England—indeed, it would not be surprising, if the reductions should be made exclusively in favour of Belgian products. The French already import vast quantities of our cast-iron, and, in fact, without our supplies, many of their furnaces would be entirely at a standstill. Their ironmasters, as you are already aware, offer no opposition to a freer admission of that article from this country; and it is believed here, that they would not offer any very strenuous objection to a general reduction on all descriptions of our iron. They do not dread Belgium, because they think that her production, even if all of it could be sent to France, would never be sufficiently large to have any very great effect on bringing down their prices; and they think it would be good policy on their part to make concessions to her, in order to silence, in some degree, the clamour against their monopoly, and prevent concessions being made to England.

Original Correspondence.

THE COST-BOOK SYSTEM.

SIR,—You will much oblige an old subscriber, and attentive reader, of your able Journal, by giving insertion to the following opinion, which, after much experience of its advantages, he has come to the conclusion, will spring from the adoption, on a more extended scale than has hitherto been practised, of the principle of working mines on the "Cost-book System." I beg respectfully to state, that I have held, for the last twenty years, shares in various mines in Cornwall; and, although I have been interested in that way in about a dozen mines at the same time, I have only sold my shares in three speculations of that description, and have thought it advisable, merely, in two instances, to resign my interest in these concerns, during my lengthened career of speculation. I have passed from three to four months a year, during that time, in different mining districts in Cornwall (not as a director); and, although I do not pretend to be a mining philosopher, or to possess an extraordinary degree of knowledge on such subjects, I am anxious to obtain information on matters connected with their government, which I have not, during my lengthened experience, been able to acquire; and will deem it a favour, if you, Sir, or any of your correspondents, can enlighten me, by pointing out any other system of government that will produce more advantages to the parties concerned in them, than the one which much experience has led me to believe is the best yet devised for the purpose, and that is the *"Cost-book System."* The outline of that system, I will assume to be as follows:—A number of persons form a company, and shares, to different amounts, are taken; when the entire number, of which the company is to be composed, are appropriated, the parties holding them enter into certain resolutions, in the Cost-book, for the government of their concern, which are to bind the whole of the proprietors. Some of these regulations are of material importance; the first of which, I take to be, the number of shares into which the mine is to be divided; secondly, the period at which meetings are to be held, which is, generally, at intervals of two or three months, when full statements of the affairs of the company are, generally, laid before the shareholders, and calculations are made of the amount of capital that will be required, to carry on the operations of the company, until the next meeting will take place. A call is made accordingly, and a time fixed for the payment of it by each shareholder, in proportion to the amount of shares which he holds, to carry that decision into proper effect. Such shareholders as are prevented by business, or otherwise, from being in attendance at these meetings, can authorise any other shareholder to vote for him on such occasions. Another regulation on the Cost-book Plan, is, that a proprietor may, at any time, relinquish his interest by giving one month's notice to the purser or secretary of his intention to do so; and, by paying his proportion of the cost incurred, he can obtain a *lien* upon the property of the company, and appoint a competent person—the company appointing another to value the property. According to the estimate furnished by valuators so deputed, of the value of the shares, the party wishing to retire, would be entitled to compensation for the amount of the shares in his possession, and would be exonerated from any future liability or responsibility whatever. A shareholder can at any time sell his interest by making a regular transfer. I cannot imagine any system, that for equity, safety, and protection to all concerned, can be compared with this. It is true, that, in some extreme cases, persons have suffered in having been compelled by law to pay more than their proportionate share of the cost. I have known instances where such a thing has occured; but it was produced rather by a departure from that system, than by a strict adherence to the principle upon which it was founded—the fact is, the shareholder by it becomes the manager of his own property, and no debts can be incurred, or calls made, without the sanction of a majority of shareholders, either present, or represented.

I believe I am correct when I say, that nearly all the large and richest mines in Cornwall are conducted on the Cost-book System; and these are indisputably the best managed in the locality. I have long been anxious to see a company formed, and strictly conducted on that principle, established in London. I have seen, from time to time, in your Journal, and in other newspapers, prospectuses of companies, advertised to be formed upon this system. I took occasion to obtain possession of many of these plans; but, until within the last week, I have not come across one in which, in my estimation, the principle was fully carried out. The one alluded to, however, after a minute examination of its details, appears to me to be got up by a party who entertains the same views on the subject that I do; and I have no hesitation in saying, that, if the plan, as laid down by him, is fairly carried out, much good will result from it, and others, who will become witnesses of its prosperity, will quickly follow an example so much deserving of imitation.

I presume that it will be imagined that, in giving this opinion, I am led to do so by the fact, of the mines that were worked on the Cost-book System being those from which I have received the most satisfactory returns. That supposition would be a correct one; for they have paid me more than 25 per cent. per annum on the capital invested. On the other hand, it has happened that, in almost every mine conducted on a different system, I have lost considerably, though I am fully satisfied that, if these concerns were properly worked, they would pay most satisfactorily: I am not, however, such a novice as to believe that any system of management would make a poor lode rich, or a man, who is constitutionally vicious, honest. Although I am at present advanced in age, and have had for some time an intention of retiring from mining speculations altogether, yet so satisfied have I become of the advantages that will result from it, that I would be again tempted to invest money in a mine conducted purely on the Cost-book System.—A FRIEND TO MINING: *London, March* 17.

HYPOTHESES ON IRON.

SIR,—In reply to Mr. Mitchell [see Journal 6th March], I beg to state, that my objection was confined to the difficultly-reducible oxides; "other substances" is a translation of the "&c.," which closed Mr. R. Mushet's summary. That the oxides previously named—hematite, millscale, or those adduced by Mr. Mitchell—can be deoxidised, and are so, both in the reverberatory and blast-furnace, I did not contest. I objected to an untenable analogy with oxides of a different character. The point of my refusal to the discrimination of chemical and mechanical betwixt white and grey iron is this: we have no *evidence* that the unions of iron and carbon are chemical in the true sense—viz: a combination in limited equivalents. What we possess is to the contrary—that they are mere alloys, with the properties which belong to alloys by fusion; certainly not chemical, neither mechanical, in the ordinary meaning. From the richest grey iron to the softest steel, there is a gradual diminution of carbon, which repudiates the conditions of chemical union. To fix, then, on white iron, as a chemical compound, is arbitrary, and so is the term; for what is the difference betwixt white iron of the furnace and of the refinery? The quotations from Karsten are unsatisfactory; they indicate more carbon in white than grey iron, contrary to the experience of the manufacturer, who finds the greyness of the iron bears a direct ratio to the presence of carbon. There is a discrepancy also in attributing an enlarged alloy of silicon in grey iron, which equally applies to the proportion of manganese, as both these substances have, by experience, if any, a decarbonating effect. His details do not inspire confidence. The presence of phosphorus in iron has been much disputed. The analyses proposed by Mr. Mitchell are of the greatest importance, and an acknowledged desideratum; but I call attention for his guidance to the vagueness and discordant elements of M. Karsten's proportions, which must be corrected, by stating carefully the locality of the iron analysed, and taking the gradations from the same furnace. That so large a portion as 7 per cent. of manganese may be alloyed with some cast-iron, is possible; but to attribute generally seven parts of manganese to grey iron as an essential, and four parts to white iron, is absurd. This objection has equal force to the amounts of silicon; the precise quantity of alloys in iron from different places is the desideratum. My position respecting the conjectural state of our information, is proved by the inconsistent data now advanced. M. Karsten gives the chemical per centage of white iron as 5·140; Mr. R. Mushet, 2·74—while the experiments of Mr. Mushet, sen., give ¼th, or 4·00, for the proportion, which latter I prefer. I, therefore, say, there is much to learn. Carbon and iron *may* unite in definite equivalents; and the gradations from cast-iron to steel *may* be produced by alloys of these unions with iron—thus, grey iron, in its various shades, being an alloy with different quantites of graphite, the lower vouches of iron *may* be alloys with some other state of carbon; but I do not see in what form but this a chemical union can be maintained consistently with facts. I prefer the term "alloy" to "mechanical combination;" for in a mould of grey iron, were the latter term correct, or much more in the hearth of the blast-furnace, the white iron would be found sinking to the bottom, while the graphite, or carbon, floated on the top. We have no such appearance in castings. In the blast-furnace it is impossible to suppose, where fluid iron is retained for 12 hours, that bodies, so different in specific gravity as graphite and carbon, compared with iron, would retain their place in mere mechanical suspension. The graphite must float, and the chemical white iron sink; but this is not the result, I know, in practice. The term "solution" would more clearly meet the exigencies before us; if grey iron be a solution of graphite in iron, as is extremely probable, because grey pig-iron, when reaching a certain richness, delivers itself of the graphite, which then floats apart as the well-known "keesh," and affords evidence that there is a point of saturation—so, on the other division from steel to mottled iron, the varieties may contain *more carbon* in solution. Graphite beginning now to be formed, its *partial* presence is evinced in the mottled fracture. The alloy of carbon and iron is a remarkable provision without parallel in any other metals, and, therefore, the less easy to be understood. Mr. Mitchell's accuracy is known; and such a series as he proposes, especially extended to ores and fluxes, would prove a national benefit. As to Mr. R. Mushet, I reaffirm he asserted the metallization of "clay, lime, &c.," in contact with the air. The veil of carbonic oxide cannot disguise the truth. If a medium is interposed betwixt the iron and the atmosphere, the ordinary process of puddling must cease, which consists in the combustion of the carbon by the oxygen of the air. Again, to state the friction of substances, *in se* or *ex se*, produces heat, not only "untangible," but to ignition is a *platitude*, the fact is so well known. The question was the "intense" heat generated by the hammer, producing effects for which the puddling furnace was not adequate. What change of heat takes place in puddled iron by the time it leaves the hammer, our senses inform us without argument. Had Mr. R. Mushet known the practical niceties in forging steel, he would not have entered a comparison between a puddled ball and a steel bar. The forging of iron without fire must be asserted by *practice* not *demonstration*, and will, as I have stated, be an economy, if the doctrine of dispersed carbon producing the granular fracture of faulty iron be not a "random speculation." I also possess the experience of Mr. Mushet, sen.—for I conceive his more important opinions are in his published works—and this he has never advanced, which is indeed an assertion, that bad iron is blistered steel; but Mr. R. Mushet has changed his ground, which is now inattention in the blast-furnace. The comparison of cold and red short iron, with light and heavy puddlings, exceeds my power of analogy. To class *same* and *similar* ores in one category, is a remarkable inaccuracy of language; and I must advert to his habitual animadversions on the British ironmasters. Is it not singular that "inattention," "slovenliness," "inefficiency," &c., should supply the globe with iron? I know something of ironmasters and their acts; but very little of "cooks." That a vitreous coating is formed on the iron by the quartz at a welding heat, there is, I think, no reason to doubt; but I much question whether a more fusible substance would answer and survive the process. I believe, likewise, the angularity of the particles of silex is an essential feature, obtaining an adhesion by penetrating the softened mass. If it be fact that lime absorbs the equivalent of oxygen in peroxide of iron, and reduces it to protoxide, this goes to prove what I before asserted, that the earths are more probably hyperoxidated in the blast-furnace than deoxidated. This gentleman is, I perceive, following the steps of Mr. Gibbons's opponents, and must needs fight his chimera. As interested in ventilation, and having had the pleasure of perusing Mr. Gibbons's volume, I beg to state, there is no mention in it of an air pit on the rise. This common practice was advanced by Mr. Cadman, as *his* improvement on Mr. Gibbons's, and as speedily demolished by Mr. Deakin, who asserted it as old as the hills, or, at least, as the mines in them. The fate of Whiston and Ditton seem destined for these unfortunate gentlemen. In conclusion, may I offer a simple rule for ascertaining the contents of a book?—to *read* it.—FERREUS: *March* 9.

ON THE MANUFACTURE OF IRON.

SIR,—It is much to be regretted that so little attention has been bestowed in England and elsewhere on the chemical constitution of iron prepared in the high furnace; this seems the more surprising, from the fact that the metal in question is by far the most valuable—far more valuable than any other, to the well-being of our manufactures. On the continent more analyses of iron have been performed than in England, and the greater part of the knowledge we possess on this subject is derived from the continentals, yet there is much to be desired, for it is many years since these analyses have been performed, and during the lapse of that time most analytical processes have been much improved, and rendered much more exact; but, from the laws laid down by Karsten, as derived from his analyses, much valuable information has been gained. If "Scrutator" had read the analyses of Karsten and other chemists, he would not have fallen into the error he has, in supposing it can be taken for granted that the proportion of carbon in cast-iron varies little, if any, in a variety of samples. The following analyses will disprove his supposition. The analyses five in number, were conducted by Svanberg; I shall merely give the proportions of carbon and iron:—No. 1, carbon, 2·8913; iron 96·115: No. 2, carbon, 3·0529; iron, 95·6033: No. 3, carbon, 5·3617; iron, 93·3224: No. 4, carbon, 6·4797; iron, 90·0985; No. 5, carbon, 4·4064; iron, 94,3948.

No. 4, which contains nearly 6·5 per cent. of carbon, is an anthracite iron, and is remarkable from the amount of carbon it contains. I might quote many other analyses, but the foregone are sufficient to disprove the position assumed by "Scrutator." If "Scrutator" had read my last communication, he would have seen that I fully proved the presence of free or uncombined carbon in grey iron, whereas in white iron no uncombined carbon is present; I, at the same time, gave the method of determining the amount of each form of carbon. I think the hint thrown out by "Scrutator," as regards the formation of carburet of iron by the temporary formation, and subsequent decomposition, of a cyanide of that metal, is deserving of much attention; but it requires the consideration of so many theoretical ideas, that it would need much time and labour to perfect the hypothesis. I regret that I have so little time at command this week, otherwise I would enter more fully into the matter, but I hope to resume it at some future period.—JOHN MITCHELL: 23, *Hawley-road, March* 16.

ON THE MANUFACTURE OF IRON.

SIR,—Cinder is such a general term for all waste and refuse about ironworks, that in discussing, on the present occasion, the varieties and composition of ciader from blast-furnaces, I propose to term it "slag." This ought to be an opaque, uniform, and lightish-coloured mass, something of an olive colour, rather faded. It is, in reality, fused porcelain—the earth's silica, and alumina, rendered fusible by an addition of lime. I must here observe, that these remarks apply solely to the smelting of the common iron ores of the South Wales basin, and the conclusions are drawn from the working of furnaces with anthracite coal—my attention having been lately more immediately directed to such, and the manufacture of iron with that peculiar description of fuel being likely greatly to increase—at the same time, the observations I make upon the composition of the ores and the cinder, bear upon the working of furnaces with coke. Slag ought not to be glass; when it is in such state, oxide of iron must be present, to have vitrified the earths, or there has been an excess of silica in the ores to form a silicate of iron. The application of chemistry, to the examination of ores, is most essential—not merely to determine their value with reference to the per centage of iron which they contain, although this is of itself very important, since it makes a great difference, whether ores contains 28 or 30 per cent. of iron, but to ascertain the other component parts. In some ores silica predominates greatly, with very little alumina; others contain a full proportion of the latter. Silica may be regarded, in various compounds, as acting the part of an acid, alumina and lime as alkalies. When the latter are deficient in quantity in proportion to the former, in smelting iron, so as to be insufficient, as it were, to saturate it, the silica and iron will unite into a silicate, and give the slag a glassy appearance. When, from the imperfect action of the blast, or other defect in the working of a furnace, unreduced oxide of iron fuses with the earths, the slag is sometimes a perfect transparent glass. Some ores are termed hot mine, others mild mine—the former, I suppose, are silicious, the latter aluminous. These are mixed together; so far well—but it would certainly be more satisfactory to have their compositions determined, and to use them in due proportions. With too great a proportion of silica, iron must be wasted—with too much alumina, the fusion will be more difficult. It would not be a very difficult task to determine the component parts of the most abundant veins of mine in a certain extent of workings, and to arrange the supply, so that a due and uniform mixture of the earths went into the furnace. It is very common to see a portion of the slag coming from the furnace, for a time perfect glass, and then a portion an opaque, light-coloured mass, nearly white, or a cream colour. This is evidently from the limestone not being mixed with the ore. A mass of limestone goes into the furnace in a lump together, where it cannot mix uniformly

with the ore. Fusion is only going on over a very limited space, small portions melting down slowly, it is impossible that the lime can become uniformly combined with the other earths—consequently, one part of the slag is glass, and another part a mixture of glass and fused limestone. I contend, that the mine and limestone should be thoroughly and intimately mixed together before going into the furnace. This is stoutly opposed, but I can find no reasonable objection. With regard to mixing the coal, possibly it may be requisite that that should go into the furnace in considerable bulks together; still I would recommend a sprinkling of a portion of the coal with the mine and limestone, to act chemically in reducing the oxide of iron in the mine.

This part of the subject being more directly connected with the action of the blast, and general arrangement for working the furnace, I will not at present enter into it, but return to those on some future occasion. By way of illustrating the advantage of applying some chemical science, so as to come home to mere *l. s. d.* men, I will suppose two cases, and use a few figures. In round numbers, we will say, that it requires 3 tons of mine, 1 ton of limestone, and 1½ ton of coal, to produce a ton of pig-iron, and that a furnace yields 60 tons per week. There is abundance of calcareous iron ore, or carbonate or oxide of iron, in combination with lime. Suppose that, instead of using only the common ironstones, a due proportion of calcareous ore be mixed with them, and no limestone be used, 3 tons of material only will have to be fused instead of 4 tons—consequently, it is fair to assume that 22½ cwts. of coal will suffice instead of 30 cwts.: thus, instead of 110 cwts. of material going into the furnace for each ton of iron, 82½ cwts. only will be required; and thus a furnace, which in the first case turned out 60 tons of iron in the week, could be made by the second case to yield 80 tons, without any additional labour of charging, no extra expense for blast-engine and hot air stoves, and no more slag to remove.

Pontardulais, March 16. SCRUTATOR.

IMPROVEMENTS IN COPPER SMELTING.

SIR,—In all the remarks made by your correspondents upon copper smelting, and of its "almost antideluvian method," there are two classes of men who come in for a share of reflection—namely: the men of science and the workmen. Whether the former deserves any censure for not having improved the process of smelting, I cannot say, and will leave these worthy gentlemen to settle that themselves; but, as a workman, the blame put upon our prejudices is altogether erroneous, and is done either as a scape-goat to frustrated projects, or protection to monopoly. How impotent, indeed, would be the smelting interests, if a few uncombined, ignorant, and underpaid men, could, from generation to generation, prevent improvements being introduced into the trade. We have our prejudices, like every other trade; and I must confess that, being brought up from children in the trade, ours are very strong, but they are in themselves harmless—we are altogether passive machines; our opinions and likings are never asked; if a master or his agent commands, every hand is to the brow with willing obedience—each anxious to know his wish, that he may be the more active therein; it is the ruling passion in us workmen *to please*—the agent is the guide—the workman, I am sorry to say, being as passive as if he breathed steam; thus far I say, in answer to the constant blame heaped upon the workmen and their prejudices. But I am not altogether so clear, as some of your correspondents may imagine, that we are not warranted to exercise, were it in our power, not only a prejudice, but a determined resistance, to the introduction of anything that will shorten our process. This, Sir, may seem startling; but, probably, you will put me right. We are made to understand, that our masters are bound not to make above a certain amount of copper in the year. Now, any process that will enable them to make that quantity in nine months, or, by letting out one-fourth of their furnaces, will be a great profit to them, but would throw one-fourth of us poor workmen idle; are we, then, to be blamed for possessing prejudices in favour of a system which enables us to provide for our homes, our wives, and our little ones? A ROASTER.

Swansea, March 15.

STEAM-BOILER EXPLOSIONS.

SIR,—I have had a little experience of high-pressure engines, and, perhaps, the following facts, in two different cases, may explain the cause of these explosions:—One of the steam-engines is a 40-horse one, working between 30 lbs. and 40 lbs. on the square inch. On going to the works, I found them stopped, and the steam-engine going pretty hard, pumping water into the *two* boilers. On looking into the boiler-house, I found them both *red-hot*—so much so, that bits of chips and rope-yarn was on fire near them. On making inquiry into the matter, of course the engine was stopped at once; I found that the engineman, who is a steady person, had tried the boilers, and found the water low. He put on the feed of water, but it turned out that the capping, or packing, round the plunger of the force-pump, for filling the boilers with water, had suddenly come off, after he had tried the water-cocks. This once took place, some years ago, with another high-pressure engine-boiler; the reason of no explosion taking place is, I have had two safety-valves on each boiler, each pair being on a different construction from the other, what is called the steel-yard safety-valve, I have found to act best. If, therefore, boilers are provided with *two* safety-valves, as above, and of proper size, and the pressure of the steam at the proper working power of the boiler, and the boiler in good working order, I do not think any explosions would take place when the boilers happen to go dry.—E. G.: *Canonbie, March* 15.

VENTILATION OF MINES.

SIR,—I have perused most of the letters, which have appeared in your valuable Journal at various times, upon this important subject; and I am sure the public have much reason to feel grateful to you for having gratuitously circulated, for general information, so many valuable observations. The *Times* newspaper, of Monday last, again records another of those frightful accidents, by explosion of fire-damp, to have taken place in a colliery at Barnsley, in Yorkshire, by which 80 unfortunate men have been hurried into eternity! If you will permit me, I should like to add a few observations on the subject of ventilation. It appears to me, that the furnace ventilation is a most dangerous system—at the same time, it is one which has obtained the greatest preference; and there can be no doubt, that the best arrangement is the one adopted in the northern collieries—viz.: with a large furnace placed at the bottom of the upcast shaft. As to leaving the matter to Nature, or erecting chimneys on top of the upcast pit, with a furnace at the bottom of such chimney, is clearly what your correspondent, "V.," of Newcastle-upon-Tyne, states it to be, "a retrogression." The ascensional force of the upcast pit depends upon its temperature, as compared with the temperature of a corresponding column of atmospheric air; and the difference in weight of these two columns will depend upon their difference of temperature—that is, the up column will be $\frac{1}{480}$th lighter than the downcast for every degree of temperature that it exceeds it; the best plan is to illustrate it by an example, and, therefore, I will first of all give this simple formula:—Let P′ vol. of gas at any temperature above 32°; T′ the number of degrees above that point; P its volume at 30°: then $P' = P\left(\frac{480 + T'}{480}\right)$. Suppose the upcast pit to be 936 ft deep, a column of air of a square foot base, at—

					Sectional area of pit, say 100 feet.
32°	temperature	will be	1208	ozs. in weight	120800
50°	"	"	1164	"	116400
60°	"	"	1141	"	114100
70°	"	"	1119	"	111900
80°	"	"	1090	"	109000
90°	"	"	1077	"	107700
100°	"	"	1058	"	105800

Let the example be, in one case, temperature of atmosphere 60°, and average temperature of upcast pit 100°, we have 105800; 60° temperature we have 114100—8300: which, divided by 100, equals 83 ozs. per square ft., equal to 5 lbs. and 3 ozs. per square foot. Suppose another example—Temperature of atmosphere 90°, and upcast column 100°, we have 105800; at 90°, 107700—1900, or 1 lb. and 3 ozs. per square foot—so that, in one state of the atmosphere in summer, the ascensional power would be about 1¼ lb. per square foot, and in winter say 5½ lbs. per square foot: these are examples for a mine, which would be considered as well ventilated under the furnace system. It is evident, from these calculations, that, as your correspondent "V." remarks, the natural system, or the chimney, would never do; and that, in some cases, the upcast might become a downcast. These calculations show, in a simple form, the variations in the ascensional force of the upcast pit; and from this a deduction ought again to be made for the impurities thrown into the upcast column from the furnace, which must increase its specific gravity, and thus reduce this ascentional force materially. Now, let us for a moment consider the effect of a barometrical alteration in the atmosphere—let us imagine a sudden fall in the density of half-a-pound per square inch, equal to 1 inch of mercury, a pressure of $\frac{1}{30}$th removed from the goaf of a mine, which, perhaps, extends over 200 acres of surface, in a seam of coal two yards thick: this would contain 1936000 cubic yds., deduct one-third for pillars left underground, would leave 1290667 cubic yards as a reservoir for impure air; a fall of 1 in. in the barometer would throw into the galleries of the mine 1161594 cubic feet of the impure gases, a great portion of which might be carburetted hydrogen gas. Now, imagine this to occur when the ascensional force is reduced almost to nothing, either by a thermometrical change in the atmosphere, or by neglect of the furnace-man, would not either of these causes be sufficient to account for one of those dreadful explosions? and how can this be controlled? It was these considerations which induced me to turn my attention to some mechanical method, which would place the ventilation of mines upon a safe footing—that invention is now before the public, and I hope, ere long, to report its successful application, as I have made arrangements with one of the largest coalworkers in the Principality, to erect one of my mine ventilators.—W. P. STRUVE: *Swansea, March* 10.

[The descriptive pamphlet of Mr. W. P. Struvé's mine ventilator may be had of John Weale, bookseller, 59, High Holborn.]

THE STANDARD, AND MINE SURVEYING.

SIR,—In order to help your correspondent [*see* Journal 27th Feb.], the "South Australian Miner," out of his perplexity about what he calls the *fluctuation* of the standard of copper, he need only be told that the *fixed standard* of each ticketing has an accompanying *fixed produce*; and if the produce, or per centage, of any parcel or sample of ore differs from the standard produce, then the standard (or present value of a ton of fine copper) is necessarily altered to meet the difference of produce, and the customary rule in Cornwall is (technically expressed) "*one on the produce, two on the standard*—or, in explanation, if the produce increases or diminishes 1 per cent. from the standard produce, the amount of the standard is increased or diminished 2*l*. For example, if the given standard is 110*l*. and given produce 8 per cent., then a parcel giving only 6½, is entitled to a standard of 113*l*.; and another parcel, yielding a produce of 10½ per cent., must be computed at a standard of only 105*l*. This "fluctuation" is quite fair and reasonable, as the smelter's expenses increase in proportion to the richness of the ore, and there are other causes which call for this regulation.

Another correspondent, "A. B.," in the Journal of the 27th Feb., desires to know what angle will give 30 links, in a distance of 60 yards. The following is a plain method:—A link is 7·92 in. × 30 = 237·60 ÷ 12 = 19·8 —being 19 ft. 9½ in. Then, we know that 60 yards is 30 fathoms, and 19 ft. 9½ in., divided by 30, gives, again, 7·92 in., or the length of a link. Now, by inspection of the hypothenuse table of the *Practical Miners' Guide* (page 68), it will be seen that the nearest number to 7·92 in., is 7·838, &c., which stands as the base of the angle 6° 15′; and the difference between the 7·92 and 7·838, &c., will give 5′ more for the exact angle—therefore, if "A. B." will add 6° 20′ to the angle or bearing of 7° south of east, on which he is now driving his adit, and, consequently, alter his course to 13° 20′ south of east, he will gain the required distance of 30 links (or 19 ft. 9½ in.), in extending his adit 60 yards further, and thereby avoid encroaching on his "neighbour's property." This gentleman desires to know also, "how much a bearing of 1° will shift a course in one mile?" The same table in the *Miners' Guide* shows that 1° in a fathom gives 1·25657 in. of base, and this tabular; multiplied by 880 (the number of fathoms in a mile), will shift the course 15 fms. 2 ft. 6 in. JOHN BUDGE.

Callington, March 3.

VENTILATION OF MINES—MR. GIBBONS AND "W."

SIR,—Mr. Gibbons, or "W.," having retired from this discussion, I will not pursue him to his retirement—but will, after a brief remark or two, leave the points elicited, with their respective arguments, to the judgment of your mining readers. Your correspondent, I submit, has not sustained a single view that was impugned—but, against the laws of Nature and science, has contented himself with reckless, and, sometimes, confused assertions. He first protests, *in limine*, against the use of "fire;" and then he will place at the top of his upcast, and bottom of his chimney, something tantamount to a *blast-furnace*. It is proven to him, that the same blast-furnace can be placed at the bottom of the upcast with far greater effect; that is nothing, he will erect a costly chimney, and have it at the top, because he (Mr. Gibbons) has said it, and now repeats it, without a single reason to sustain it. Air rarefied, withdrawn, or expelled from the whole length of a tube, will form it into a more efficient vacuum—that air so effected from its external extremity, or only from a small portion of that tube. This will be so till a part is greater than the whole. "V." must excuse me, when I doubt that hundreds of mines in South Staffordshire have been worked by natural ventilation alone. Without fire, or other artificial means, to keep the upcast always the upcast, under every temperature, no matter whether with or without a chimney—the thing is physically impossible. That mines with little or no means of ventilation may be worked, is perfectly possible, but they are no better than gigantic reservoirs of poison. Now, Mr. Gibbons will have nothing but *natural ventilation*; and then, again, he will have a *blast-furnace ventilation*. The former system, with chimneys, we showed him, was practised in France, and this country, upwards of 100 years ago; and now he himself shows it is practised in "many hundred pits in South Staffordshire." Then this is no new system. The latter system, ventilation by fire, we informed him, has been pursued since 1764 in England, and is now entirely depended on in the most extensive coal mines in the world—those of the north. Then this is no new system either. Mr. Gibbons has, then, taught us nothing new. He has renovated some exploded practices of the last century, which had better still remain in the tomb of time, with the things that were. What in his work is new, is not good; and what is good, is not new. In the north, here, we are disposed, at all times, to sink as many pits as can be properly put down, and the coal below will bear. At Wallsend, there is a pit for about every 30 acres. Though seeking only truth, I must admit, that there are frequently too few pits on some of our extensive workings—but it has not been left to this day, or Mr. Gibbons, to urge more. The House of Commons' Committee, in 1835, and the Shields' Committee, in 1840, have strongly done that before. There can be no objection to Mr. Gibbons learning anything that Dr. Murray, or Dr. Clanny can teach him, except pumping carbonic acid gas from a mine by the former, or lighting a mine with the glass lamp of the latter—both of which pieces of scientific information, I will venture to say, his mining education had better be without, except theoretically. The fearful catastrophe at Barnsley, I agree with your correspondent in thinking, ought to bring on Government inquiry and legislation. In the north we have no objection to properly-qualified practical inspectors, and fair and judicious legislation. Both life and produce will be better secured by them. V.

Newcastle-upon-Tyne, March 15.

VENTILATION OF COAL MINES.

SIR,—It is to be regretted, that some of your correspondents do not answer each other in a better spirit, as if otherwise given, it may be the means of bringing out facts which would tend to improvement in our collieries. The manager of the colliery at Barnsley was certainly to blame, in keeping a scaffold in the upcast shaft so long, and it also nearly stopping up the diameter of the shaft. Hence, "W.," of Dudley, need not refer this case as an answer to "V.," of Newcastle. In my own colliery, I fortunately have very little gas; and, therefore, I am at liberty to try the natural method, as it is called, if I chose, with perfect safety. I sunk, about 10 years ago, a pit 30 fms. deep, and having the upcast shaft half that depth, the air being conducted in the workings on the Newcastle system, the downcast shaft being the drawing pit—for which "W." contends so much—and nothing interrupted the rush of air in the upcast; the result was, I never hardly required a fire in the bottom of the upcast, although carbonic acid gas is very abundant here. A few years since, I sunk another pit, to the same coal, 60 fms.—but to the dip, as the other pit got worked out, and turned the 30 fm. pit into the upcast, for the 60 fm. one; and, as a matter of course, no coals were drawn at this upcast shaft—but, much to my surprise, the 60 fm. coal-drawing shaft became, naturally, the upcast, and the open 30 fm. pit the downcast; in both cases a lamp, or candle, could not be kept in, from the draft at the bottom of the downcast. The cause of the above was, that the 30 fm. pit was about *twelve or fourteen feet* below the surface level of the old upcast, and the new 60 fm. shaft; and there cannot be a doubt, if the 30 fm. pit was carried up 12 or 14 ft. *above* the level of the deeper shaft, the draft would go the other way. There cannot be any doubt, that Mr. Gibbons, or "W.," is right, in putting on a chimney on the upcast shaft, as it appears others have done, but he is wrong in putting his fire at the pit top; and to do without fire always in hot, dry weather, is incurring a great risk; his plan of a small shaft, cut in the side of the larger shaft, is not sound mining—but no one, in putting on an air-chimney, is called on by Mr. G., or "W.," to follow his method; as a separate pit, on the Newcastle plan of fitting a single pit, is certainly much better and safer; and, as to having coals coming up the upcast or the downcast shafts, it can make very little difference, provided a chimney can be got to act properly, with a fire in the bottom of the shaft, when the coals have to be drawn up the upcast. There is one improvement Mr. Gibbons overlooks in colliery matters—that is, in not enforcing guide-rods and cages *in his pits, or book*. On looking over your paper for a number of years back, the number of deaths from workmen falling out of the skip, or corve, &c., is very great indeed.

Carlisle, March 13. X.

MR. GIBBONS ON VENTILATION.

SIR,—Only five weeks since, I entreated your correspondents to dismiss obstacles, and afford Mr. Gibbons's book *On Ventilation* a candid, attentive perusal. I implored unanimity by the awful suggestion, that we knew not whether the morning or evening would bring the news of a hundred souls hurried to their last account, and *now* these words have literally been fulfilled! Three-fourths of the number have already perished—the rest left with life a burden to themselves, and their anguished relatives. Is it too much to hope frivolous discussion will cease, that a scheme, which comes before us, with the warrant of having diminished the chance of such catastrophes, will receive consideration *upon its merits*; and that it may now be possible to see what that scheme *is*, instead of what it *is not*? Let us hear no more of "Mr. Gibbons's views—their errors." Mr. Gibbons has no "views," but that carburetted hydrogen is lighter than air, and will escape with opportunity. If, in his *application* of this view, there be "errors," let not *Newcastle* point them out by argument; but in *Staffordshire*, suggest to Mr. Gibbons, that which he courts, improvement on what he has *done*. The assurance of arguing, *without inspection*, that the book says, "the thing which is not," discredits the arguer. When there is enough of hydrogen in a mine to cause danger, it *cannot* stay there, unless *detained*; and the reasoning on two columns of common air, by "V.," is wrong. One column in the downcast is air, the other is a mixed column, of less specific gravity. This has, *in itself*, such effective power, that numerous collieries are ventilated without *any aids*, merely by its natural force. Mr. Gibbons, setting out from this ground as an *abuse*, condemns the precarious practice, which, if it answer at all, *much more* must the additional undisturbed current of a tall chimney. A quantity of gas, to destroy 100 individuals, cannot be in a mine without *gross fault*—it is IMPOSSIBLE. Hydrogen is made lighter than air for *man's protection*. With explosions in our rooms, and fires in our farm-yards, we should never know an hour of quiet safety, did it not rise at once to higher regions. This excessive levity is *provided* for us; and the plain, complete appliance of it to the safety of the collier, are Mr. Gibbons's "views," whatever may be their "errors." This is the "*new*" law of Nature, which "V." has yet to learn. I submit, no man 200 miles from Kingswinford, except in a mesmeric trance, can know what is done there, and deny it. It is distressing to see folly on such serious occasions. As to heavy carbonic gas, if one current will carry it out of a mine, so will another, however produced—to say it is projected into the air, as rapid rivers hurl stones into the sea, is an extravagance. A man who shakes his medicine, having two specific gravities, may say the lighter fluid projects the heavier into his stomach, as rivers cast stones into the sea, but will give a mistaken idea of the mixture of two fluids. Carbonic acid gas is carried out of mines in mixture with hydrogen, and with the atmosphere; if the mean gravity exceed the latter, the compound will not rise, and fire *must* be imparted, to give it lightness, becoming then "*an auxiliary*." "V." knows as well as I, that cases where this gas preponderates are *exceptions*, and for these exceptions Mr. Gibbons provides, as well as for the general rule. But the point which *demands* and tortures public attention, is the explosion of inflammable air; and no person who reads throughout the condensed details of Mr. Gibbons's book, but must remain *convinced*, that these explosions, or the possibility of them, are *unnecessary* and *unpardonable*. It is *easier* to ventilate such mines than others—the element of danger is the economical element of health, comfort, and safety, if so applied. Let me then urge, by the mangled bodies of a hundred fellow creatures, that we hear no more of "*Mr. Gibbons's views—their errors.*" Two of his *practices* are admitted as right by "V.," that *pits* should be more frequent, and that the upcast ought not to draw coal. Carry down an air-chimney, *well-built*, by the side of every downcast and upcast now existing, and turn each into working pits, each will accomplish Mr. Gibbons's advice, and get its "own section of coal;" each section will have pure air, instead of the last being aired by the loaded impurities of the first. Economy will be gained in the friction of ventilating power travelling less than half the distance, affairs will be brought within grasp, and that perfect command effected, which is the essential of Mr. Gibbons's volume. Were it made out, the book has not one new idea (which seems the point of ambition), that proves nothing against it; if every detail had been practised *somewhere* at *sometime*, it would not invalidate the fact, that they are *now united*, in effectual combination, at those collieries, of which the book is not a *theory*, but a *description*. As to M. Pratique, coal mining in France is an experiment—in England, a reality. We meet the errors of foreigners with courtesy; and he evidently, from inaptness at our language, has mistaken the number and expressions of Mr. Gibbons's enemies for those of his friends, as well as magnified the practical importance of his formula. The calculation he recommends, would be a task more nice than wise. The velocity of the efflux of gaseous fluids has been a vexed problem in its simplest form, and the formula for friction is not decided, even in a straight tube; before it be carried out through the chambers and turnings of a complicated mine, most of them will probably be exhausted. Now, indeed, M. Pratique must begin before the beginning, and take an anterior step to No. 1. The friction is directly as the density and velocity of the fluid, and the length of the tube; to establish the first two, he must estimate the mean gravity of all the gases coming out of a coal mine, and on which the velocity depends; he may then be in a position to deal with friction. The latter element—*i. e.*, the length of the tube—is the most tangible; and to conquer this in *practice*, which will be better than theory, let him sink frequent pits; and getting his coal in manageable, well-proportioned sections, accede to the economy of Mr. Gibbons's advice.

In a colliery where there is a ventilating chimney, and a winding or pumping-engine, the following experiment might be tried:—Convey steam, by a small pipe, into the base of the stack. The heat of its intromission will not only rarefy the air, but displacing an equal volume to itself, in proportion as it condenses in the ascent, a degree of vacuum will be formed, which might prove a powerful agent on emergency, to set the current in motion. One cubic foot of water is evaporated by about 6 lbs. of coal; this expanded 1700 times, at the temperature of 212°, would entirely fill a chimney 25 ft. area, and 70 ft. high; and in proportion to the colapse, the velocity of current obtained would be great, perhaps with more economy than by direct fire, for it needs 500° of Fahrenheit only to double the expansive volume of air. DAVID MUSHET, Jun.

Gloucester, March 17.

EXPLOSIONS IN COLLIERIES.

SIR,—It appears to me, that in the investigations respecting explosions of foul air in pits, that the attention of the coroners and juries is directed to the wrong point; the one they generally make for is by what means the sulphur was fired—whereas the inquiry should be, who permitted the sulphur to remain there to be fired. It is my firm opinion, that the majority of these frequent calamities might be avoided, if proper precautions were taken to prevent persons from working near collections of foul air. In the case at Barnsley the overlooker, Shuttleworth, states, "there has always been foul air in the breaks (or what we should call hollows I suppose), where the coal has been got. Now, these hollows are, no doubt, accessible to the workman, the only mark being a shovel reared up to show the men where to work, which notice a stranger might not remark, or know the meaning of. There should be, in my opinion, stringent laws to prevent any colliery being worked, as long as there is a body of sulphur known to be in it, till it is cleared out, which can always be done, though, perhaps, not without a good deal of expense sometimes. If a body of sulphur is in a pit, the lives of, perhaps, 100 men are dependent every instant on the thoughtlessness of, perhaps, a child. I have hardly ever known an accident from explosion in these parts (and the ones which have come under my notice are almost, great and small, innumerable), but which might have been prevented by proper caution on the part of the foremen, or the miners themselves. If any person were to leave several barrels of powder exposed in a place where persons were constantly passing and repassing, with shovelsful of hot coals, and half a dozen were killed by an "*accidental*" ignition, would not the law reach the party who left the powder so exposed? I should say, certainly; and this is only a similar case to one of men being allowed to work while there is a body of foul air in the pit,

only with this aggravating circumstance, that the powder would be visible, the sulphur invisible. In the different colliery districts there appears to be a sort of insensibility to the death or sufferings of miners, just as if it were a part of their business to be killed, knocked to pieces, or suffocated; but we may hope for a better state of feeling, and to more proper attention being shown to the comfort and safety of this hard-working, and (for their employment) most highly-respectably class of men. If these great explosions could be thoroughly sifted (which cannot always be done, owing to most of the parties engaged being often swept off, and to the general backwardness of the working classes, to give any evidence that may turn against their employers, and *frequently* to the *entire ignorance* of the coroners andjur ies respecting mining operations, the former being generally a lawyer, and the latter shop or beer-house keepers), it would be found in most cases, I think, that the gas that caused them was *known* before the explosion to have been there, and by having the pit thoroughly cleaned, they might have been prevented. There should be a clever, scientific, unbiassed man appointed by Government to examine strictly into the causes of these accidents; and by the above and other laws which might be brought forward, many valuable lives would, I doubt not, be saved, as well from explosions as from the breaking of ropes, &c., which arise, *for the most part*, from the negligence of the parties concerned. A MINER.

Dudley, March 16.

ON THE VENTILATION OF COLLIERIES.

SIR,—By reference to your Journal of the 26th of December last, it will be seen that I commenced what was intended to form the first of a series of communications on the ventilation of collieries. Circumstances, which it is not necessary to mention in detail, prevented my proceeding, forthwith, to complete that series; but I considered the omission of less consequence, seeing that your pages were occupied by several correspondents upon the same subject: and I naturally supposed that, in a discussion upon ventilation, conducted by colliers, and promulgated through the Journal of that body, the principles and practice of ventilation would be fully and clearly developed, and that my proposed communications would be unnecessary and uncalled for. Judge, then, my surprise when I saw personal invective used as a weapon; when I saw the genius of envy and detraction ravaging the fair field, which ought to have been devoted to mercy, and the attributes of science; when I saw, from the productions of your correspondents, that the collier of 1840 was superior in genius, in intelligence, and in practical knowledge, to the collier of 1846.

I resume my pen, upon this subject, with mingled feelings of grief and anger. Grief, that your columns should be wasted—yea, infinitely worse than wasted—in being the channel of the discussion; grief, that after all the dissemination of knowledge upon this subject, that yet the collier should be blind, moonblind, a monomaniac, imbecile, and mad; grief, that when the devastating destructive power of fire-damp has turned the attention of all classes to its consideration, that when the Government inspector is looked for as a necessary part of the paraphernalia of the inquest room, that when it is hourly expected that a legislative enactment, of a general and comprehensive character, will be provided to attempt to remedy the present discrepancies and faults of the colliery system—an enactment, which will weigh hardly upon all, and unjustly upon many: when I see this, and see the course pursued by your correspondents, is my language too strong? Are my expressions too forcible? I find men of science—men who, judging from their productions, are capable of better things—playing with their fate, and laughing at their folly. If the collier looks carelessly on, until he is manacled, is he not blind? If upon all subjects but one, he is perfectly sane and vigilant, is he not moonblinded and a monomaniac? If in the face of all the above evils, with their collateral evil influences, he has commenced and carried on a discussion, ostensibly upon ventilation, but which, in reality, is widely apart from it, is he not imbecile and mad?

Out of the many communications which have appeared, one only,—if wrong, I am open to conviction—has had the least semblance of ventilation; and that, as if afraid of the step it had unconsciously taken, immediately retraces its steps into the general vacuity. I refer to the *last seven* lines of Mr. Deakin's letter of the 2d of January.

It is not any part of my intention to join in this discussion, as it has turned upon the merits or demerits of Mr. Gibbons's system of ventilation: a system with which I am entirely unacquainted, not having seen that gentleman's pamphlet; but I would suggest to your correspondents—who have busied themselves in demolishing that gentleman's plans and operations—who have nearly unanimously shown, or pretended to show, the utter infeasibility of his scheme—that when they demolish one plan or system, they should consider themselves bound to substitute it by another, and, in their consideration at least, a better. Nothing of this sort has been done; satire, sarcasm, and invective, have been levelled at Mr. Gibbons and his system; he has been fully bespattered by your contributors, who have shown, by their writings, and by the spirit of their essays, that their motto is—"Novelty is dangerous, and change is innovation." One of the most plausible of the letters which have appeared, and which came under the signature of "V.," and dated from Newcastle-on-Tyne, condemns, *in toto*, the method under discussion; and condemns it upon the most unwarrantable reasoning, and upon a hypothesis completely at variance with the fact: this conduct is the more reprehensible, as "V." has neither given a modification of Mr. Gibbons's plan, nor yet substituted it by another. His letter partakes of the supercilious arrogance of the northern colliers, who condemn all who "are not of their ilk;" and vainly imagine that the scientific collier is only to be found on the banks of the Tyne. I will analyse his letter—I will show the fallacy of his argument, and the falseness of his theory; and I will do this because he condemns upon scientific principles—*save the mark:* by reference to your Journal of the 6th of February, on the 63d page, your readers will find this manifestation of genius. "V." says Mr. Gibbons's proposition is to cause a disturbance in the equilibrium, between the columns of air in the downcast and upcast shafts, by natural means alone, exclusive of artificial. He proposes to effect this by erecting, over the upcast, a chimney from 60 ft. to 90 ft. high. This may be Mr. Gibbons's proposition; if it is, and that proposition can be shown to be in accordance with the laws and phenomena of pneumatics, it is a step, and a huge step, in the right direction. I do not in this communication profess myself an advocate of Mr. Gibbons's system; were I to do so, I should place myself in the position of "one who writes upon a matter which he understandeth not"—I only attack "V.'s" position, and defend that of Mr. Gibbons, because I see an attempt to smother the system of the latter, and to smother it by unfair means, and illogical deductions. I will not, in my defence, follow "V." through his letter—it would occupy more time than I can well devote to it, and it would trespass upon your columns to a greater length than its importance would justify.

"V.," in proceeding to show the inapplicability and inefficiency of Mr. Gibbons's system, makes the following quotation—viz: "He states that his mine is on an average from 62° to 64° of heat," which is about the natural heat of the earth at the depth he specifies; and upon this ground "V." takes his stand, and attempts to show, by the most unfair methods, its uselessness. "V." proceeds to say, "that if the heat of the atmosphere at the surface of the earth is greater than the natural heat of the mine, that *then the whole ventilation, first becoming stagnant, will be certain to be reversed*—for (mark his reasoning) the columns of air over the downcast and upcast to the level of the top of the upcast chimney being qual, and the chimney now containing colder and heavier air (at 62° or 64°) than the atmosphere, which is (say) at 80°, the upcast column will become the preponderating column, from the surface to the level of the top of the chimney; and it will, consequently, become a downcast. This will always be the case whenever the atmospheric heat is greater than the air of the mine and the upcast; and whenever the temperature of the mine and the atmosphere approximates, or becomes equal, the preponderance of one or the other column will be lost—they will become equal, the spring of action will be lost, and ventilation will altogether cease." I confess myself utterly unable to fathom the depth of this phraseology; and, as my communication has already attained a length which may make it trespass upon your columns, I will only, at present, show the fallacy of his principal argument, reserving to myself the right of again returning to the subject. Granting, for the present, that the effects described would naturally follow such causes, "V." has completely failed to show that such causes could ever be brought into operation. I deny, *in toto*, that ever the effects or causes alluded to by "V." could, under the circumstances, be produced. The facts of the case are simply these: taking the air of the surface at 80°, and the mine at 62°, what is the consequence? This, the air in passing into the mine at 80°, its excess of heat above that of the mine—viz., 18°—passes off, almost immediately, by radiation—and must, necessarily, continue to pass off until the temperature of the mine becomes 80°, which is a physical impossibility—we have now air, at 62°, travelling through the mine. I will not, at present, notice the after increase of temperature, by coming in contact with the workman, his horses, nor his candles—all of which would rarefy the air, and cause it to rush to the upcast—but will, at once, proceed to the upcast; and what presents itself there? The following strange and anomalous phenomena: The chimney, by standing exposed to 80° of heat, has acquired a considerably higher temperature than the column of air passing through it; the natural consequence is, expansion, and a current, varying as the height of the chimney and the temperature of the column. I leave this hypothesis for your readers; it is founded upon correct—and, although at variance with "V.'s" appeal to science, also upon philosophical and scientific—principles. If I have spent too much time, in exposing what was self-evidently wrong, and if I have given a certain degree of importance to an airy nothing, I hope to stand excused. I have only noticed this communication, as one of the most flagrant and specious; and to justify myself in the expressions, apparently harsh, in the previous part of this letter.

I begin to suppose, with Dr. Murray, that there is more in the plan than I have yet seen; wherefore, otherwise, the cry of the Ephesians. I purpose, at an early day, to resume my communications on the Theory of Ventilation.—F. B.: *March* 2.

THE ATMOSPHERIC RAILWAY SYSTEM.

SIR,—The rapidity with which railways have been established in Great Britain, has no parallel in the history of mechanical inventions. Whether the patronage they have received, and are yet receiving, proceeds from a conviction of their real merits, or is the result of a gambling speculation of fearful magnitude, it is not for me to say. In this letter, my remarks shall be confined chiefly to two important items of expense, which are inseparably connected with a locomotive engine mode of conveyance.

When Mr. Berkley's paper on the "Atmospheric Railway System" was read before the Society of Civil Engineers, Mr. Hawksley (a member of that body, but apparently no partisan to any particular system of public conveyance) stated that the annual expense from deterioration in rails by locomotive engines was 264*l.* per mile; and this statement was not questioned by any member present, and may, therefore, be received as correct.

In this estimate, Mr. Hawksley supposed the rails to last 10 years on an average; but if they weigh 80 lbs. per yard, and are purchased for 10*l.* per ton, the yearly deterioration would be 25*l.* per mile, in place of 264*l.* Supposing, then, 5000 miles of railway to be executed in this, or any other country, and subject to a deterioration of 25*l.* per mile, the annual expense for rails alone would be 1,255,000*l.* In this estimate, the value of the old rails is not overlooked; in many instances, it would not repay the expense consequent on removing them, and replacing the new ones—for example, were the old ones imported from a distant country, and the new ones exported from England.

When we give a moment's reflection to the fact that, locomotive engines, like horses, must have hold of the surface over which they travel to obtain progressive movement, and consider that these engines weigh from 14 to 20 tons each, and travel at all velocities, from 25 to 50 miles per hour, dragging after them trains weighing from 40 to 100 tons, our wonder ceases at the rapid deterioration of the rails. It is not the grip alone, however, which causes the deterioration; there is another evil whereby the rails suffer severely.

On all railways, a certain allowance is made for clearance between the rails and the flanges of the carriage wheels. The driving wheels of locomotive engines are both large and heavy; and when, from any imperfection in the permanent way, the locomotive engine rocks, the wheels zigzag violently between the rails, to the full extent of the allowance given, and many a heavy blow the rails receive rom this evil. The traction of the engine wheels, and these blows, jointly combined with the ponderous weight of the engine and boiler, soon tell on every part of the permanent way, by unfixing the chairs on their respective blocks and sleepers, and these are shaken on their foundations from the one end of the line to the other; there is no rest to the permanent way over which a locomotive engine travels. I have seen strong rails deflect under them, like thin ice under the foot of a skater.

The deterioration of *locomotive engines* is also alarmingly great. Chev. Pambour, in a clever *Treatise on Locomotive Engines*, gives a statement of this expense, in half-yearly accounts, as it was incurred on the Liverpool and Manchester line, from June 30, 1831, to June 30, 1834. These expenses I have arranged in the following manner, and they include nothing but men's wages and materials—wood, brass, copper, and iron:—First half year, 12,203*l.*; second, 7117*l.*; third, 7075*l.*; fourth, 7405*l.*; fifth, 8156*l.*; sixth, 9572*l.* The length of the line being 30 miles, these sums average an annual expense of 572*l.* per mile, which, if added to the expense of rails, makes 823*l.* per mile, for the yearly expense in maintaining rails and locomotive engines. From the same authority, during the same period, we have an account of the expense of maintaining the *permanent way*:—First half-year, 6,599*l.*; second, 7331*l.*; third, 6878*l.*; fourth, 6714*l.*; fifth, 6425*l.*; sixth, 9350*l.*: in all, for three years, amounting to 43,297*l.* Admitting that a large proportion of this expense was incurred in the purchase of new materials, such as stone blocks, chairs, and sleepers, and the average expense of maintaining the permanent way, not to exceed 300*l.* per mile, then, in those years which this heavy expense was incurred, the shareholders would receive so much less profit on working the line. Do they now get the difference, or 16,297*l.*?—or, does the locomotive engines thump to pieces their blocks, chairs, and sleepers, at such a rate, as to keep up a continual demand every three years for new ones? Expenses like those, and caused by the evils mentioned, may well have deterred any attempt at making a railroad across the Isthmus of Suez for locomotive engines—but when we know that none of these faults are identified with an atmospheric railroad, it is surprising that this mode has not been thought of for crossing that arid land, in preference to a ship canal, which, if ever executed, may, in a short time afterwards, be choked up by the dense clouds of sand which sweep across the desert.

From the partial success which has attended the Croydon atmospheric line during the last 12 months, it may be supposed that I ought to be less sanguine in the success of atmospheric railways. To such conjectures I would reply, no practical engineer, well acquainted with *pneumatic* machinery, would have expected a better result, after seeing the defective manner in which the apparatus on that line is designed and constructed. I am also to be understood, as not building my confidence on any other plan which is at present before the public. The atmosphere being a thin and subtle fluid, capable of entering by the smallest imaginable defect in the apparatus, anywhere and everywhere—from the piston in the air-pump-cylinder to the travelling piston in the vacuum tube—there is no plan I have seen, or heard of, which is sufficiently correct, when the piston is travelling at high velocities within the tube, to be anything like air-tight. The longitudinal valve, too, and the transverse joints in the tube—that is, where the short lengths join, fall far short of that perfection which it is quite essential they should possess. The valves of the air-pump must also be greatly improved, before atmospheric railways can compete successfully with the present system, in speed and regularity.

In my endeavour to attain this perfection, which I believe I have done, it cost me two years of labour, and more mental anxiety than any mechanical subject had previously caused; I foresaw the necessity for a new invention for a vacuum tube and longitudinal valve, and to attain the perfection aimed at, it was necessary to employ new materials; and in order to have the tube and valves manufactured at a moderate expense, it was also necessary for me to invent machinery to make them. When my plans were finished, I modelled my invention for an air-tight valve, to test its merits, and had the gratification to find that it remained air-tight for 14 days, without any discernible leakage into the vacuum tube; I mention this, apart from its utility to atmospheric railways, believing the principle will be found useful to other purposes in mechanical science.

In order that my plan for an atmospheric railway may have some comparative standard as respects its cost, I subjoin Mr. Robert Stephenson's estimate for a double line of rails, similar to the Croydon single line, with tubes 15 in. diameter; and below it, an estimate of what mine would cost, with a tube 18 in. diameter, for a single line. By comparison, it will be seen, that my estimate is less, by 37 per cent., in first cost; and, from the tube being 18 in. diameter, in place of 15 in., 30 per cent. more in propelling power. This is one important advantage—but I consider the facility with which the tubes, and valves, can be manufactured, and the certainty of them being air-tight, in all climates, and all states of weather, to be much greater.

Mr. STEPHENSON'S ESTIMATE.

Two vacuum tubes, 15 inches diameter	£7000	0	0
Two engines, of 250-horse power each, with pumps, &c., at 25*l.* per horse-power	£12,500	0	0
Engine-house and chimney, reservoir, or well	1,500	0	0
Total for 3½ miles	£14,000	0	0
Proportion per mile in length	4000	0	0
Total cost per mile—double line of rails	£11,000	0	0

Mr. WHITE'S ESTIMATE.

Vacuum tube, with valves, complete, 18 inches diameter, and bored out, or otherwise made smooth and true	£1760	0	0
Two engines, of 100-horse power each, with pumps, complete, at 28*l.* per horse-power	£5600	0	0
Engine-house and chimney	500	0	0
Total for 4 miles	£5500	0	0
Proportion for one mile in length	1326	0	0
20 per cent. profit on manufacturing tubes and valves	352	0	0
Total cost per mile—single line of rails	£3438	0	0

Walcot-place, Kennington-road, March 17. JAMES WHITE, C.E.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	*Address.*	*Day.*	*Hour.*
Asiatic	14, Grafton-street	Saturday	2 P.M.
Geographical	3, Waterloo-place	Monday	8½ P.M.
British Architects	16, Grosvenor-street	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Medical and Chirurgical	53, Berners-street	Tuesday	8½ P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Zoological	11, Hanover-square	Tuesday	8½ P.M.
Geological	Somerset-house	Wednesday	8½ P.M.
Royal	Somerset-house	Thursday	4 P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Royal Society Literature	4, St. Martin's-place	Thursday	4 P.M.
Royal Institution	Albemarle-street	Friday	8 P.M.
Philological	Lond. Lib., 12, St. James's-sq.	Friday	8 P.M.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.
Westminster Medical	27 A, Sackville-street	Saturday	8 P.M.

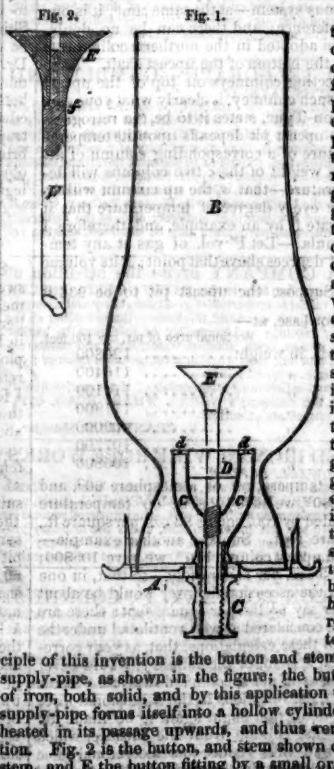
INSTITUTION OF CIVIL ENGINEERS.

March 2.—The discussion upon Mr. Jackson's paper, "On the Canal of the Helder" [see *Mining Journal*, Feb. 20], was renewed, and was extended to such a length, as to preclude the reading of any paper.

March 9.—The paper read was "On the practical forms of engineering works exposed to the action of the waves of the sea, and on the advantages and disadvantages of certain forms of construction for breakwaters and sea walls."

March 16.—The paper read was "A description of the method adopted in Preparing the Foundation, and in Building the Bridge over the Poldervaart, on the line of the Amsterdam and Rotterdam Railway," by the Chevalier Conrad M. Inst. C. E., compiled by Mr. C. Manby (secretary), from documents furnished by Mynheer Wenckeback.—This bridge derived its importance from the peculiarly treacherous nature of the ground upon which it was constructed, for, although in Holland bad foundations are the rule rather than the exception, the difficulties were in this case so peculiarly great, as to demand particular notice. The Poldervaart is a canal encompassing and conveying away the waters from the Polders, or spots of drained land in the commune of Kethel. The railway, traversing it at a considerable angle, rendered a skew bridge, of three openings, necessary—the centre one 13 ft. space for the navigation, and the two side arches 21 feet space each, for the drainage water. The proceedings were commenced in the usual manner, with the intention of having separate foundations for each pier; this was by shooting in large quantities of sand, to form dams, within which, when pumped dry, the foundations would have been excavated. After a length of about 70 feet of sand, a dam 10 feet deep had been filled in, without exhibiting any signs of sinking; a heavy thunder-storm occurred, during which the whole mass of sand dam was suddenly engulphed to a depth of 29 feet; whilst there arose simultaneously, at a short distance down the canal, to above the water level, a mass of bog-earth, of an area of 4489 square feet—this mass increased at subsequent periods of the proceedings to the area of 9628 square feet. It was evident, that an extensive subterraneous shifting of the bog-earth had occurred, and there was reason to fear for the safety of the adjacent dykes and other works. Piling and fascine works were tried without success—piles of 70 feet in length, when driven and tied together by waling pieces, swerved bodily from their position, and became useless; fascines equally failed in producing stability. The engineer, therefore, determined, after directing the canal water into a side cut, to surround the site of the intended foundation with mounds of sand, allowing for their subsidence into the gulph below, and then squeezing up the bog-earth around and within the spot. This was at length completed, and the foundation pit was enabled to be pumped dry. It then became necessary to remove all the bog-earth from within the space for the foundation, which was accomplished by digging out spaces of a yard square, and filling them in with sand as they proceeded, until, by commencing at the exterior, and working inwards to the centre, all the bog-earth was removed, and a bed of sand had been formed in its place. The piles for the ordinary foundation, used in Holland, were then driven through the made ground, and the structure was completed with perfect success—the sand dams, and the masses of upraised bog-earth outside, being subsequently dredged up in the ordinary manner, to restore the canal to its original bed. In this description, the circumstance most deserving attention, appeared to be the sudden rising of the bog-earth during a thunder-storm. This is, however, of frequent occurrence in Holland; and it would appear as if the adhesion of the masses of bog-earth to the bottom was so slight, that the vibration communicated to the water by the thunder, sufficed to destroy the equilibrium, and the bog-turf, which, from its slight specific gravity, will float even when wet, instantly rose to the surface. When, therefore, as in this case, a heavy mass of sand was placed in the vicinity of such bog-earth, the bottom was unable to resist the pressure, and the least vibration caused it to break through the crust, being engulphed amidst the lighter material, which it forced up in the direction of the least resistance. The paper treated at some length on all the precautions necessary in this and similar constructions in Holland, where such bad foundations are of very constant occurrence. In the discussion which ensued, descriptions were given of the simpler methods employed in similar situations in England, where bridges of greater weight and space were constructed upon foundations of nearly as treacherous natures—for instance, on one of the branches of the Norfolk Railway—or a bridge of which the swinging portion weighed 100 tons, a series of 16 piles, driven 50 ft. deep into the silt in 12-ft. water, supported a cast-iron kirb, upon which a cast-iron close-jointed cylinder was lowered and secured—within this, the centre foundation was built, and had stood perfectly. Other instances of raft, or floating foundations, common in Lincolnshire, were adduced, showing the simple means by which such local difficulties were overcome in England.

THE NATIONAL ECONOMIC GAS BURNER.



We have lately had an opportunity of testing the superiority of this new burner, which gives out a most brilliant light, perfectly white down to the lowest point of ignition, and which is, consequently, a sure test of the perfect combustion of the gas, the proceeds given off being merely the union of the oxygen of the air with the hydrogen, to form the vapour of water, and with the carbon of the carburetted hydrogen forming carbonic acid. By the side of an Argand, a jet, or a bat's-wing, proceeding from the same double branch, the effect is most striking, and clearly evinces the true philosophical, although simple, principles on which it is constructed. The annexed is a diagram and description of the burner. Fig. 1 is a sectional elevation of burner and glass: A the gallery; B the glass, which gradually swells out from the circular burner in the manner shown, to suit the form of flame; C is the supply-pipe, from which spring two branches, *c*, *c*, surmounted by the circular burner, D, which has a certain number of orifices round its upper surface, similar to an Argand. The main principle of this invention is the button and stem E, which is screwed into the supply-pipe, as shown in the figure; the button is of brass, and the stem of iron, both solid, and by this application the gas in rising through the supply-pipe forms itself into a hollow cylinder, and becomes considerably heated in its passage upwards, and thus rendered more easy of combustion. Fig. 2 is the button, and stem shown on a larger scale, F being the stem, and E the button fitting by a small orifice on to the small part of the stem at *f*. The inventors claim for it a saving of from 30 to 40 per cent. over other burners, and further particulars will be found in our advertising columns of to-day.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

SECOND CALL OF FIVE POUNDS PER SHARE.

The directors having passed a resolution, requiring the shareholders to PAY a further CALL of FIVE POUNDS on each share held by them respectively, on the 19th day of April, 1847, Notice is hereby given, that the shareholders are required to PAY such CALL, on the day appointed, to one of the undermentioned bankers; and, in default thereof, they will be charged with interest, at the rate of 5 per cent. per annum from that date, until the said call is actually paid.

The BIRMINGHAM BANKING COMPANY, Messrs. ATTWOODS, SPOONER, & Co., } Birmingham.

OR AT THEIR LONDON AGENTS:

Messrs. JONES LOYD & CO., for the Birmingham Banking Company.
Messrs. SPOONER, ATTWOOD, & Co., for Messrs. Attwoods & Co.; and at
Messrs. MOSS & CO.'s Liverpool, for the Birmingham Banking Company.

A circular will be sent to each shareholder, which must be deposited at the bankers when the call is paid. By order of the board of directors,

JOHN WILLIAM KIRSHAW, Secretary.

34, Bennett's-hill, Birmingham, Feb. 27, 1847.

CALEDONIAN RAILWAY—LOANS ON DEBENTURES.

—The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS of LOANS on DEBENTURES, in sums of not less than £500, for three or five years: the interest to be payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.—Tenders to be addressed to this office.

By order of the directors, D. RANKINE, Treasurer.

Caledonian Railway Office, 122, Princes-street, Edinburgh, Feb. 26, 1847.

CLARENCE RAILWAY.—Notice is hereby given, that a

SPECIAL GENERAL MEETING of the company of proprietors of the CLARENCE RAILWAY will be HELD at the Tavern, commonly called, or known by the name of, the George and Vulture Tavern, situate in St. Michael's-alley, Cornhill, in the city of London, on Tuesday, the 23d day of March next, to commence at One o'clock in the afternoon, when the Draft of a Bill, introduced into Parliament during the present session, intituled, "A Bill to enable the Amalgamation of the Clarence Railway and the Leeds and Thirsk Railway," will be submitted for the approbation of the proprietors.—Dated this 17th day of February, 1847.

HENRY BLANSHARD, GEORGE WILLIAM ROWLEY, } Respectively proprietors possessed of more than five shares each in the above-mentioned undertaking.

CHARLES BENSON, Secretary.

CLARENCE RAILWAY.—Notice is hereby given, that, pursuant to a RESOLUTION of the company of proprietors of the CLARENCE RAILWAY, passed at a General Meeting, on the 31st day of March, 1846, and in conformity with the Acts of Parliament regulating the said company, a MEETING of the company of proprietors will be HELD at the George and Vulture Tavern, St. Michael's-alley, Cornhill, London, on Wednesday, the 31st day of March, 1847, at One o'clock precisely in the afternoon.

CHARLES BENSON, Clerk to the Company of Proprietors.

80, Old Broad-street, London, March 15, 1847.

MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY.—TO CONTRACTORS FOR PUBLIC WORKS.

The directors of this railway are ready to RECEIVE TENDERS for the CONSTRUCTION of a PIER, about 500 yards long, with a DOCK, and OTHER WORKS, at NEW HOLLAND, LINCOLNSHIRE.

Further information may be obtained at Mr. Fowler's offices, 13, Abingdon-street, Westminster; or at the resident engineer's office, Brigg, where plans, sections, and specifications of the works may be seen, on and after Wednesday, the 31st March; and the directors will meet at their offices, in Sheffield, on Tuesday, the 13th April, to let the contracts.

Sealed tenders, addressed to the chairman, must be delivered before Eleven o'clock on Tuesday, the 13th of April.

The directors do not bind themselves to accept the lowest tender.

YARBOROUGH, Chairman.

WEST FLANDERS RAILWAYS.—Notice is hereby given,

that the THIRD HALF-YEARLY GENERAL MEETING of the proprietors in this undertaking will be HELD at the London Tavern, Bishopsgate-street, London, on Saturday, the 27th of March next, at One o'clock precisely, on the general business of the company.—Dated this 26th day of February, 1847.

(Signed) W. PARRY RICHARDS, President.
WILLIAM JESSE, Secretary.

London, 11, King William-street, Mansion-house.

WEST FLANDERS RAILWAYS COMPANY.—NOTICE

OF CALL.—Notice is hereby given, that the directors have made a further CALL of TWO POUNDS per share on each and every share in this undertaking, and that the same is made PAYABLE on the 29th day of March inst. The proprietors are required to pay the same, on or before the said 29th day of March, to Messrs. Glyn, Halifax, Mills, and Co., bankers, Lombard-street, London.

Interest, at the rate of 5 per cent. per annum, will be charged on all sums remaining unpaid after the said 29th day of March; and if any call shall remain unpaid after one month from that date, the shares will become absolutely forfeited, according to the statutes of the company.—Dated this 5th day of March, 1847.

(Signed) W. P. RICHARDS, President.
11, King William-street, Mansion-house. WILLIAM JESSE, Secretary.

PNEUMATIC ENGINE AND SAFETY RAILWAY CARRIAGE COMPANY.

UNDER ROYAL LETTERS PATENT.

Capital £500,000, in 50,000 shares, of £10 each.—Deposit 5s. per share.
The first call will not exceed 10s. per share.

The object of this company is to introduce a new system of propulsion, which will supersede the necessity of steam for railways, stationary engines, navigation, and in all other cases where motive-power is required, by the substitution of a new means of power, derived from the atmosphere alone, without the use of lineal tubes, stationary engines, or local machinery of any kind.

Prospectuses, with full details, will be ready in a few days, and may be obtained of Messrs. Wm. Barry and Co., 7, Birchin-lane, Cornhill, and Messrs. Lamond and Co., Hall of Commerce, by whom applications for shares will be received in London.

TO RAILWAY COMPANIES, CONTRACTORS, AND

OTHERS, requiring RAILWAY AXLES, WHEELS, and IRONWORK for CARRIAGES, &c.; also IRON and STRAINED WIRE FENCES, may be SUPPLIED by

MR. EDWARD HILL,
OF BRIERLEY HILL IRON-WORKS, NEAR DUDLEY,

who will give the BEST PRICES for OLD AXLES, and any description of SCRAP IRON

ELECTRO-TELEGRAPHIC CONVERSER.—

Messrs. BRETT & LITTLE respectfully recommend Directors of Railways, Mining Companies, and others, to DELAY the ADOPTION of any particular TELEGRAPH, until the completion of their patents shall place Brett and Little in a position to introduce a most perfect and effective instrument, at about one-third the cost of those at present in use.—140, Holborn-bars.

GALVANIC BATTERY.—CAUTION.—We hereby

CAUTION all persons AGAINST MAKING, SELLING, or USING, or CAUSING to be MADE, SOLD, or USED, a CERTAIN BATTERY, denominated a PERCOLATING GALVANIC TROUGH, or altering, or causing to be altered, any description of galvanic battery to that principle—the same being an infringement of our patent right, and a portion of the apparatus connected with our Patent Electro-Telegraphic Converser; for every infringement of which, after this notice, proceedings will be forthwith instituted.

140, Holborn-bars. BRETT & LITTLE.

ELECTRO-MAGNETIC TELEGRAPH—GAMBLE AND NOTT'S PATENT.

PATRONISED by H. R. H. PRINCE ALBERT, the LORDS OF THE ADMIRALTY, &c:

The PATENTEES beg to inform all RAILWAY COMPANIES, that they are ready to TREAT with them for the ERECTION of the TELEGRAPH, on any length of railway, on the most reasonable terms.—This instrument, from its simplicity of construction and certainty of action, is, after the most severe test, proved to be the most useful and efficient instrument of the kind ever yet invented, as reported on by Dr. Faraday, Capt. Brandreth, Professor Brande, Dr. Bachhoffner, &c., and, in fact, all the science of the country.

It may be seen in daily operation on the London and North-Western Railway, where it is in practical use, between Blisworth and Northampton stations; also, at the Telegraph Office, 2, Royal Exchange-buildings, where all particulars may be obtained, and the report seen.

THE GUTTA PERCHA COMPANY invite the attention of

Engineers, Machinists, Millowners, &c. &c., to the PATENT GUTTA PERCHA DRIVING BANDS, which possess the valuable properties of great durability and strength, permanent contractility and uniformity of substance and thickness—thus avoiding all the irregularity of motion, occasioned by piecings and inequality of thickness in leather straps. They are not affected by oils, grease, acids, alkalies, water, &c.; and possess extraordinary facilities for being joined, and hug their work in a remarkable manner; can be had of any width, substance, or length, without joints.

The company continue to receive most satisfactory testimonials of the superior quality of these Bands, which can be seen at the company's WORKS, WHARF-ROAD, CITY-ROAD, where all orders will receive immediate attention.

London, March 3, 1847. E. GRANVILLE, Manager.

PATENT GALVANISED IRON AND WIRE ROPE WORKS,

MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.—Mr. J. S. Tregellas, Truro, agent for Cornwall.

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.

By order of the board, P. G. GREVILLE, Secretary.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING

AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

IMPORTANT TO ENGINEERS, MANUFACTURERS,

RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED PATENT ELASTIC METALLIC PISTONS.

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES FOR STEAM-BOILERS.

THE BIRMINGHAM PATENT IRON TUBE COMPANY,
42, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,

MANUFACTURE TUBES under an exclusive license from Mr. Richard Prosser, the patentee. These tubes are now very extensively used in the boilers of marine and locomotive steam-engines in England and on the continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld. They may be fixed in the boilers without ferules, and can be taken out and refixed without additional trouble or expense.—Address, 42, Cambridge-street, Crescent, Birmingham.

LONDON WAREHOUSE,
68, *UPPER THAMES-STREET.*

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—

LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

W. H. RICHARDSON, JUN., & CO., DARLASTON, *STAFFORDSHIRE,*

MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Roose's recent invention (patented August, 1846).—Address as above.

STEAM COAL—WITHOUT SMOKE, as per experiments

made at her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.)

OFFICES—2, MOORGATE-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharfat Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

THE PATENT SAFETY FUSE,

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Tuborne, Cornwall.

BUDGE'S MINER'S GUIDE IMPROVED.

Lately published, a New Edition, corrected and enlarged, 8vo., with Portrait, 12s., cloth,

THE PRACTICAL MINER'S GUIDE: comprising a Set of

Trigonometrical Tables, adapted to all the purposes of Oblique or Diagonal, Vertical, Horizontal, and Traverse Dialling; with their application to the Dial, Exercise of Drifts, Lodes, Slides, Levelling, Inaccessible Distances, Heights, &c. &c.

By JOHN BUDGE.

London: Longman, Brown, Green, and Longmans.

COOMBE VALLEY SLATE COMPANY.

Capital £5000, in 1000 shares, of £5 each.—Deposit £1 per share.

CONDUCTED ON THE COST-BOOK SYSTEM.

OFFICE, No. 5, WHITEFRIARS-STREET, FLEET-STREET, LONDON.

The proprietors of this extensive undertaking having, after several months of persevering industry, now opened a large piece of rock, and sunk to a sufficient depth to prove its quality, take this opportunity of presenting to the public (free from any risk) a participation of its advantages, and in the several proportions as above-described.

The quarry was commenced, and will be conducted, by a party of practical men (merchants and traders), whose object it is to carry it out on a principle never yet attempted by any other company. The resources they have of turning every thing into immediate account, which, by means of improved machinery, they are enabled to do to the greatest advantage; inasmuch that what is in most quarries called waste, will in this be made marketable. They have now on hand orders for thousands of tons of slate, of every description, waiting to be supplied, which, when executed, will be turned into ready cash. There will be no expensive offices to keep up, as all the agents will be remunerated by a responsible commission, at a per centage. The strictest economy will be observed, and all the accounts open, at all times, to the inspection of the shareholders. The quarry is situate in the parish of St. Ginnes, in the county of Cornwall, one mile from the shipping port of Cragington, on the Bristol Channel, and consists of about 7 acres of land, all one entire bed of fine blue slate, 6 feet below the surface. A river runs through the estate, that will be made available for driving the machinery. The lease is granted for a term of 21 years, at the nominal rent of £10 per annum, with no royalty.

The management of the company will be vested in the hands of three trustees, and 13 committee men—the whole of them connected, more or less, with the sale or manufacture of slate.

Detailed estimates, carefully prepared, from actual experience, with sectional drawings of the sett and present workings, have been made, which, with specimens of the slate, may be seen at the office of the company, where prospectuses, and every information, can be obtained.—Application for shares, in the usual way, may be made to Mr. James Lane, mining share agent, 75, Old Broad-street, City, London; Mr. T. Sanford, Exeter; Messrs. Teyth and Luscombe, Plymouth; Mr. T. Carpenter, Callington; Mr. J. Huxham, Launceston; and of Mr. C. S. Richardson, secretary, at the office of the company.

STEAM TO INDIA VIA EGYPT, MALTA, ITALY,

ALEXANDRIA, AND THE PENINSULAR PORTS.

PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.

The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, whence are steamers to Naples, Genoa, Civeta Vecchia, three times a month.

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.

A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.—ESTABLISHED 1824.

Persons of all ages, and in every station, may assure with this society on very moderate terms.—No extra premium is required for sea risk, or residence in going to, residing at, or returning from, any part of Europe. Those wishing to visit, or reside in, other parts of the world, may also effect policies at a small increase of premium.

FOURTH DIVISION OF PROFITS.

A detailed Report (just published) of all the BONUSES declared—a statement of the LARGE RESERVE FUND—the favourable prospects of those NOW ASSURING—and the state of the society generally—can be obtained, free of expense, of any of the society's agents, or by addressing a letter to GEO. H. PINCKARD, Resident Secretary,

No. 78, Great Russell-street, Bloomsbury, London.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY.

26, CORNHILL, LONDON.

Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£448 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 19 0	7 10 4	247 4 8

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 9 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

DARTMOOR CONSOLS TIN MINING COMPANY.

SHEEPSTOR, COUNTY OF DEVON.

TO BE WORKED ON THE COST-BOOK PRINCIPLE.

In 2048 shares, of £3 each.

COMMITTEE OF MANAGEMENT.

GIDEON COLQUHOUN, Esq., Walmer Lodge, Regent's-park, London.
JOHN BANKES, Esq., Clapham Common, Clapham.
JOHN T. BENNETT, Esq., Canonbury Cottage, Islington.
JOHN PAUL, Esq., Tavistock, Devon.
JOHN SELBY, Esq., Windsor.
R. B. SULLOCK, Esq., Teignmouth, Devon.

CONSULTING ENGINEER.

J. R. Monkhouse, Esq., 18, Charles-street, St. James's.

SOLICITORS.

Messrs. Freeman, Bothamley, and Benthall, 39, Coleman-street, London.
Messrs. Willesford and Tucker, Tavistock, Devon.

BANKERS.

Messrs. Barnett, Hoares, and Co., 62, Lombard-street, London.
Messrs. Gill and Rundle, Tavistock.

OFFICES, No. 58, LOMBARD-STREET, LONDON.

PROSPECTUS.

The object of this company is to work effectually the Dartmoor Consolidated Tin Mines, in the parish of Sheepstor, in the county of Devon, the sett of which is very extensive—being about three miles in length and two miles in width—in the centre of a very productive mining district.

The Dartmoor Consolidated Mines were worked some years prior to January, 1844, when, on account of the extremely low price of tin, and a difficulty arising respecting the renewal of the lease, the operations were suspended, after making returns to the shareholders of upwards of £30,000.

A considerable sum has been expended in the erection of the necessary buildings for miners, and other purposes, as well as for machinery. The smelting-house is of sufficient size, and capable of smelting all the tin raised in the county. The company have the privilege of cutting turf to any extent, for the purpose of the mines and for smelting operations. It is, therefore, proposed to commence working the present leads at once, so as to open new and deeper levels, and to extend those at present in existence—to crosscut other lodes, and effectually and economically to work the mine on the most approved principle of modern mining.

The present price of tin offers great advantages to parties investing their money in this company, especially as there is little doubt of the price of this metal increasing considerably, in consequence (among other causes) of the Great Wheal Vor Mine having been suspended, and which mine returned one-fourth of all the tin raised in England.

The sett is held under a lease from the Lord of the Manor, at a rent of £5 per annum, and at the reduced royalty of 1-20th, for a term of 21 years, from 25th Dec., 1845.

A general meeting of the proprietors will be held half-yearly, at which a full report of the company's affairs will be submitted by the committee of management.

The operations of the company are to be carried on under the "Cost-Book" principle, which exempts the company from the provisions of the Act for the Registration of Joint-Stock Companies (7 and 8 Vic., cap. 110); the 63d section of which enacts—

"Provided always, and be it enacted, That nothing in this Act contained shall extend, or be construed to extend, to any partnership formed for the working of mines, minerals, and quarries, of what nature soever, on the principle commonly called the Cost-Book principle."

Under the "Cost-Book" principle, shareholders have the right of determining their responsibility, by giving notice of their intention to relinquish their shares, and on forfeiture of all previous payments. The 21st clause states—

"That any adventurer or shareholder may determine his or her responsibility or liability, with respect to the affairs of this mine, upon his or her giving notice, in writing, to the purser of the company, for the time being, of his or her desire of retiring from the company, and also upon depositing with the said purser the share or shares held by him or her, and signing a relinquishment of all claims or demands on the company in respect to such share or shares."

The reports of the mining agents (one of which is hereunto appended) will at once show that the state of the mine will forthwith realise a liberal profit to the shareholders.

Applications for shares to be made to the committee, at the offices of the company, No. 58, Lombard-street, where prospectuses may be had—plans, specimens, reports, and rules inspected, and every information obtained; to Messrs. Willesford and Tucker, Tavistock, Devon; and to the following sharebrokers:—Messrs. Barnett and Ellis, 11, Birchin-lane; and Charles Godwin, Esq., 2, Royal Exchange-buildings, London; J. Painter and Co., 25, Castle-street, Liverpool; Messrs. Pearsons, Birmingham; R. Tripp, Esq., 12, High-street, Exeter; James Pringle, Esq., 79, Princes-street, Edinburgh; and at the Engineer's, 18, Charles-street, St. James's; also, at the office of the *Mining Journal*, 26, Fleet-street, London.

COPY OF THE REPORT OF CAPTAIN JOHN SPARGO.

According to your request, I have been to inspect this mine. I am happy to inform you, that I cannot but give a favourable report. It is my opinion, that there is not such a speculation as the Dartmoor Consols again in the county. I have no doubt, if this mine is properly managed, it will, in a short time, give good dividends to the proprietors. The shuts of tin that will be discovered after the water is in fork, will be around those two cross-courses—I have sent a rough sketch, so that you may understand my meaning. Between the caunter lode and cross-course the present engine-shaft is sunk: I cannot say the exact distance, but, I think, about 200 fathoms from the wheel. Now, from the first shaft to the cross-course is about 40 fathoms, where the ground is quite congonial for tin, there has been rich bunches of tin discovered, and the greater part taken away. I would advise you to sink this engine-shaft, as well as the eastern one; and, it is my opinion, that, if this mine was carried on and prosecuted in a proper mine-like manner, it would amply reward the adventurers for their outlay. By an outlay of £2000, you may put the whole of the machinery and buildings in good and sufficient repair, and sink the shaft 20 fathoms deeper, and extend the levels, so as to get tin in the market. Now, between Pryce Deacon's shaft and old engine-shaft there certainly must be abundance of tin, for the following reasons:—

1. It is seldom known where a cross-course comes in contact with the lode, that it fails from making rich bunches of tin, and especially in such a strata as decomposed granite, such as in this mine.

2. It appears that, if Pryce Deacon's shaft was sunk 20 fathoms deeper, the lode would get into a more settled country, as there is a strata of dark soft granite, much composed of blue peach, bearing down at a right angle towards the lode, which altogether strongly indicates for tin.

3. There is small fibres of wolfram (commonly called cockel by the miners) dropping towards the lode, which, of course, are feeders, and must ultimately fall into the lode in depth. I find some parts of this strata has already intersected the lode west of Wildford shaft, and, at the depth of 20 fathoms, it will completely unbottom the present strata; if so, it takes its regular course.

There are two cross-courses that run through this mine; and it is my opinion, that, at the depth of 20 fathoms, they will cross the lodes in this most congenial strata. I would advise you, also, to drive east from Pryce Deacon's shaft, where you will intersect another cross-course—and at the same time drive west; and, by doing so, you will intersect another lode, where, I expect, you will discover rich bunches of tin.

I have no doubt whatever but that this mine will immediately give dividends after you extend away your levels, so as to get backs to some length, to employ sufficient hands to stope away the back, so as to keep the stumps to work.

There is a sufficient supply of water to work all the machinery necessary for the mine, which is a great advantage. I can highly recommend this mine to you and your friends—I do not know where you can find a better speculation, as a tin mine, in the two counties. I do also think, there are several other lodes in this mine that are not yet discovered, and by driving north on the cross-course would prove this, which can be done very cheap. (Signed) JOHN SPARGO.

COPY OF THE REPORT OF ASSAY OF JOHN RYAN, Esq., M.D.

The sample of "tin ore," from the "Dartmoor Consols Mine," gives, on analysis, 34 per cent. of metallic tin. You must consider this, then, as a most excellent and productive vein. (Signed) JOHN RYAN, M.D.

Laboratory, Royal Polytechnic Institution, Feb. 6, 1847.

Copy of a Letter from "COLONEL HAWKER" (the well-known author on "GUNS AND SHOOTING")

Longparish House, near Whitchurch, Hants, Oct. 31, 1846.

SIR,—I cannot resist informing you of the extraordinary effect that I have experienced by taking only a few of your LOZENGES. I had a cough, for several weeks, that defied all that had been prescribed for me; and yet I got completely rid of it by taking about half a small box of your Lozenges, which I find are the only ones that relieve the cough without deranging the stomach or digestive organs.—I am, Sir, your humble servant,

To Mr. Keating, &c., 79, St. Paul's Churchyard. P. HAWKER.

KEATING'S COUGH LOZENGES are PATRONISED also

by his Majesty the King of Prussia, his Majesty the King of Hanover, andmost of the Nobility and Clergy of the United Kingdom, and are especially recommended by the Faculty.

RECENT TESTIMONIAL.

DEAR SIR,—Having been, for a considerable time during the winter, afflicted with a violent cough, particularly at lying down in bed, which continued for several hours incessantly, and after trying many medicines without the slightest effect, I was induced to try your Lozenges; and, by taking about half a box of them, in less than 24 hours, the cough entirely left me, and I have been perfectly free from it ever since.

9, Claremont-terrace, Pentonville, I am, dear Sir, yours, very respectfully,
Feb. 17, 1845. JAMES ELLIS.
Mr. KEATING. (Late proprietor of the Chapter Coffee-house, St Paul's.)

Prepared and sold in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by T. Keating, chemist, &c., No. 79, St. Paul's Churchyard, London; and retail by all druggists and patent medicine venders in the kingdom.

N.B.—To prevent spurious imitations please to observe that the words "KEATING'S COUGH LOZENGES" are engraven on the Government stamp of each box.

NOTICE.—These Lozenges contain no opium, or any preparation of that drug.

London:—Printed and Published, weekly, by HENRY ENGLISH, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. March 20, 1847.

*** It will at all times save much delay and inconvenience, if communications are directed simply—

To THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

And POST-OFFICE ORDERS, &c., must be made payable to Mr. WM. SALMON MANSELL, as acting for the proprietors.